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ESTABLISHED IN 1872

PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

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FIFTY-THIRD YEAR

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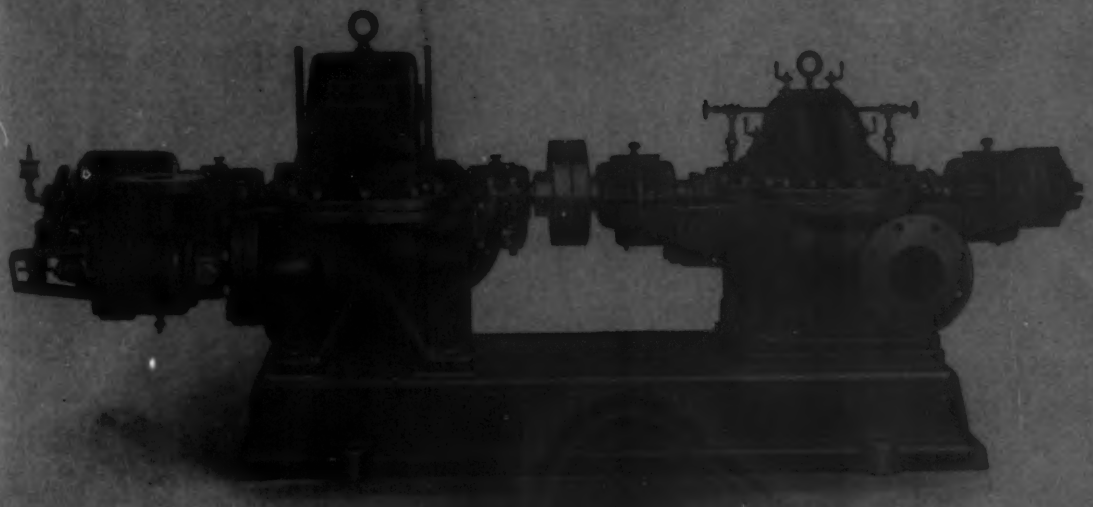

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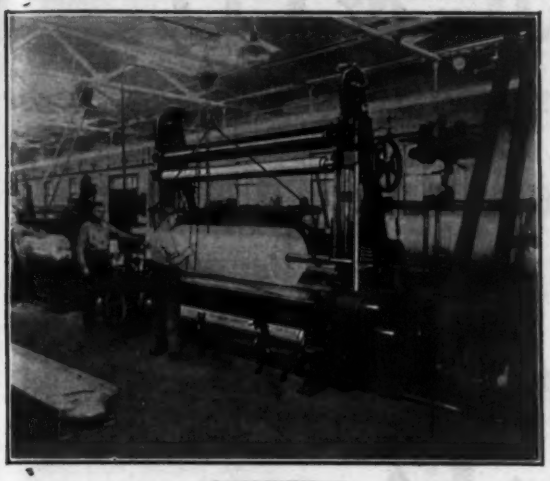

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WELL WORTH WHILE—

is this recommendation of CAMACHINE 18 by Mr. Kindleberger:

"Our big winder that is just installed and now running is immensely satisfactory. We consider the buying of this big machine a wise and economical move. The boys running this winder wear a smile that won't come off—something that I have not seen in this mill for years. Parchment Paper is the hardest paper to run over the winder that there is, and this new winder seems to do the trick without any trouble.

"We just cannot help but feel very thankful to you for making a winder that will do the work so nicely.

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The machine he bought is shown in the illustration above. It is CAMACHINE 18, the modern mill type winder. What it is doing in Mr. Kindleberger's mill it can do in yours. Will you allow us to figure on equipment to suit your particular needs? Your request will bring an immediate written or personal response from us.

CAMERON MACHINE COMPANY

61 POPLAR STREET BROOKLYN, NEW YORK

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Published Every Thursday by the

LOCKWOOD TRADE JOURNAL CO., INC.

LESLIE R. PALME' PRESIDENT — GEO. S. MACDONALD VICE-PRESIDENT & TREAS — F. K. HOPPIE SECRETARY

10 EAST 39TH ST. N.Y. U. S. A

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ESTABLISHED IN 1872

PAPER TRADE JOURNAL

Vol. LXXIX. No. 15 NEW YORK AND CHICAGO Thursday, October 9, 1924

SUPPLY AND EQUIPMENT MEN MEET TO ORGANIZE

Bylaws and Application for Certificate of Incorporation Submitted and Discussed at Session Held Yesterday Morning at Old Colony Club, Waldorf Astoria—President Henry W. Stokes of the American Paper and Pulp Association Addresses Meeting and Tells How Such an Organization Can Be of Great Assistance to the Import Committee of the Paper Industry

The supply and equipment men took a further step yesterday in their efforts to perfect an organization which will assist the Import Committee of the Paper Industry in its fight against import abuses on the part of foreign countries which ship paper and pulp into the United States, when a meeting for organization was held at the Old Colony Club, Waldorf Astoria.

The meeting was called to order by Wilbur N. Wilkinson, chairman of the temporary committee, which has been doing the work preliminary to permanent organization. In opening the meeting, which was well attended, he outlined briefly the work which has already been done and then called upon Mr. Miller, who has been acting in a legal capacity, to read the tentative draft of bylaws and the application for a certificte of incorportion.

Purposes of Organization

The latter outlines the purposes of the organization, which will be known as the Supply and Equipment Association of the Paper and Pulp Industry. These purposes, briefly summarized, are: To co-operate with and assist the paper and pulp interests in the United States, to foster the trade interests of the industry, to promote and safeguard the common interest of the members, to correct any abuses attendant upon the import of paper and pulp from any country except Canada, to secure proper classifications on all paper and pulp brought into this country, to secure proper and correct tariff on all imports, to do anything further that is proper for such an organization as is incorporated under this act.

The bylaws provide that the field of activities of the association shall be the United States, that its headquarters shall be in New York city and that its affairs shall be managed by board of directors consisting of twelve members. Ten of these directors shall be chosen to represent the varied branches of the association—two each for the building division, acids and chemicals, machinery, power and technical, wires, felts, etc. The other two directors shall be directors at large.

Referred to Organization Committee

There was a free discussion of the bylaws, etc., which was followed by a consideration of the election of directors. A motion was finally made that the organization committee appointed at a former meeting be continued, that it act upon the bylaws, etc., submitting copies to be passed upon by the law departments of the various concerns which are members and that this committee also act as a nominating committee, nominating directors representative of the various allied interests in the association.

Henry W. Stokes, president of the American Paper and Pulp Association who had already endorsed the objects of the association, was next introduced and addressed the meeting.

President Stokes Speaks

He said that on behalf of the American Paper and Pulp Association he wished to say that organization welcomed the steps taken by the supply and equipment men for he believed this new association could be of very great help in connection with the work the Import Committee of the Paper Industry has undertaken. He realized, he said, that as time goes on there were many vital questions coming up. For the past year or more he had felt that the paper industry should have more active support from those with whom it did business. The moral support of those indirectly interested in the progress of the industry was a very great help and encouragement. The paper industry had gone through good and bad times. The American Paper and Pulp Association was doing its best for the industry but there were many problems which could be better met if there were more funds available for the work. The Import Committee had important work to do but there was other work equally important. Constantly legislation was coming up which was urged by good people who think that the streams of the country are only to put fish in for the benefit of people who want to fish.

Should Present Business Side

It was getting where it was becoming the custom to take over everything and create commissions to handle any sort of special evil which someone thought existed. It was important that the business interests of the country were on hand in our legislatures and before our various commissions to see that the business side of every question was presented. The tariff was always an important issue. If the present administration was retained in office there would be no general revision of the tariff but there would be some. If a new party was successful in the campaign it would mean a complete tariff revision. American business should always be on the alert, in any event, to see that proper schedules were adopted.

"You have already done a great deal," he said in conclusion. "I realize the great difficulties you have encountered and that you are still encountering but you have gotten under way and when you once get under way things go easier. I have already endorsed this association personally but I intend to bring the matter up and have it more fully endorsed through the Import Committee. It is a good thing and the manufacturers should cooperate with you—those even who perhaps do little business directly with the paper industry."

To Engage Secretary

The matter of a secretary was discussed and a committee of three, consisting of Mr. Wilkinson, Mr. Ward and Mr. Nealley, was appointed to receive applications and pass upon the suitability of candidates.

CANADA SHOCKED BY TRAGIC DEATH OF SIR WILLIAM PRICE

President of Price Bros. & Co., Ltd., of Quebec, Killed Last Thursday by Landslide Near Company's Mills at Kenogami—Was Identified with Many Canadian Business Interests and Had Had a Notable Career—Knighted by the King in 1915 in Recognition of Early War-Time Service — Paper Industry Gratified by Announcement of Reciprocity Agreement Between Canada and Australia.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., October 6, 1924.—A great loss to the business world of Canada has been caused by the death of Sir William Price, president of the Price Bros. & Co., Limited, of Quebec, who was killed near the company's mills at Kenogami on Thursday morning last by a landslide. Sir William was inspecting damage caused by the floods, in company with two engineers, A. A. McDiarmid and H. Munro. All three were caught in the landslide but the two engineers managed to escape with minor injuries.

The company of which Sir William Price was the head ranks as the fourth largest news print manufacturing company in the world. Sir William was the active head of a concern controlled by the same family for a hundred years, a company possessing vast timber limits in northern Quebec, and, through its employment of several thousand men, exercising a powerful influence upon the industrial life of the province. His interest in public affairs he showed by standing as Conservative candidate for Quebec West in 1909 and remaining a member for that constituency until 1911, and in a greater sense he displayed his ardent patriotism when the war broke out in 1914. Sir Sam Hughes, then Minister of Militia, immediately looked around for a man in a prominent executive position to take charge of the laying out of Valcartier Camp, and it was to Sir William Price that he entrusted the seemingly stupendous task of erecting a huge modern military camp, with all its auxiliary requirements, on the Valcartier plains. Mr. Price, as he then was, was created lieutenant-colonel and under his direction thousands of men were employed in hewing out roads to the side of the prospective camp, in leveling, draining and filling in the land. All this work was done within a few weeks, and not much later the men of the first contingent were encamped at Valcartier.

Knighted by the King in 1915

In January, 1915, Mr. Price was knighted by the King, in recognition of early war-time services, which he continued with unabated ardor until the armistice was signed, and beyond, into the period of reconstruction. Although his business during the war-time called for a great deal of attention, and despite the fact that he was nearly fifty years old, Sir William recruited a forestry battalion for service and took it to England. When the battalion was broken up, Sir William anxious to get to the fighting line, gave up his rank as lieutenant-colonel and joined a railway construction battalion as captain. Besides his personal services, Sir William Price rendered valuable financial assistance to the Canadian government through his subscription to war loans.

Sir William Price's latest major undertaking was concerned with the Duke-Price Company, formed by himself and the American tobacco king, James B. Duke, to harness the waters pouring from Lake St. John and provide power for industrial plants in northern Quebec. The possibilities afforded by the Grand Discharge had long been vaguely known and it had been the ambition of others to take advantage of it but the Duke-Price combination represented the first serious project for its development. When completed the power station, with Lake St. John as its reservoir, will dispense more horsepower than any other power plant on the continent, that of Niagara Falls not excepted.

Sir William Price was born of English and Irish origin at Talca, Chili, in 1867 and was educated at Bishop's College School at Lennoxville, Quebec. He was president of Price Bros. & Co., Limited; a director of the Wayagamack Pulp and Paper Company, Limited, and of the Canadian Export Company, Limited; vice-president of the Quebec Development Company, Limited; a director of the Montreal Trust Company, the Canadian General Electric Company; president of the A. Gravel Company Limited, and of the Metis Lumber Company, Limited, and honorary president of the Union Bank of Canada. During his lifetime he was a director of the Timber Limit Owners Association; of the Quebec Railway, Light, Heat and Power Company, the Prudential Trust Company, Dominion Forestry Association, a governor of the Jeffrey Hale Hospital, Quebec, and a large contributor to its upkeep; president in 1903 of the Quebec Board of Trade; vice-president of the Canadian Lumberman's Association and a director of many other concerns.

In 1894 he married Amelia Blanche, daughter of the late R. H. Smith, president of the Quebec Bank, and had four sons and two daughters. In politics, Sir William Price was a Conservative of Independent leanings. He was a member of the Church of England.

Paper in Reciprocity Agreement

The paper industry in Canada has been greatly gratified by the announcement that reciprocity has been entered into between Canada and Australia whereby, among other items, certain classes of printing paper will be admitted into Australia free of duty, as compared with the present rate of £3 per ton. The agreement has, of course, to be submitted to both the Canadian and Australian parliaments for ratification and there appears to be some objection in Australia to the proposal to admit Canadian news print free of duty. According to a cable from Sydney, the Australian Provincial Press Association has announced that it is opposed to a preference on Canadian news print on the ground that it will injure the trade in Great Britain. At the present time, news print and other grades of paper manufactured in the United Kingdom are admitted into Australia free of duty while there is a substantial duty against Canadian paper. The Australian Provincial Press Association states that this has proven a great blessing to thousands of skilled workmen in Great Britain and to extend a preference to Canada, it argues, would be to favor American interests. The members of the Australian Provincial Press Association would prefer to pay duty on Canadian news print rather than see the interests of the commonwealth and Great Britain sacrificed. As against this, a cable from Melbourne says that the agreement is not likely to materially affect Great Britain's trade, the concessions made to Canada having been framed with great care to that end.

At one time a substantial business was done by Canadian paper exporters with Australia but this business was largely destroyed by the extension of a preference to Great Britain. For the year ending June 30, 1921, Australian imports of news print amounted to $17,303,750, while the total amount of paper of all kinds imported amounted to $21,257,087. One of the oldest shippers to Australia from Canada has been the Laurentide Company, but, naturally, owing to its location, British Columbia, through its news print mills, has been the largest shipper.

The Price of News Print

There have been many rumors in Montreal during the past week of a general reduction in the price of news print to $70 per ton. As far as can be ascertained, however, the current price of $73 per ton is being maintained and the only company in Canada selling under this price is the Donnacona Company which it is understood has made a contract with the Hearst publications covering the next 12 months at a price of $70 per ton. There can be no doubt, however, that there is a consistent demand for lower prices and some of the heads of the big companies have already foreshadowed such a reduction, notably J. H. Mead, president of the Spanish Pulp and Paper Mills, Limited, and N. A. Timins, president of the St. Lawrence Paper Mills.

CHICAGO PAPER MARKET NOW ASSUMING STEADIER ASPECT

Heavy Buying Has Recently Developed and Has Started the Mills Humming Again—Coarse Papers Have Encouraging Outlook But Chip Board Shows Slowness—Program Issued for National Paper Trade Convention, October 13, 14 and 15—Master Products Co. Incorporates and Changes Name—Much Interest Being Developed in Centralized Printing Trades Offices Undertaking.

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, Ill., October 6, 1924.—The paper market for this territory has seemingly passed through its rapid pickup stage and is taking on a steadier aspect. In the last six weeks a marked improvement took place bringing back heavy buyers with orders that immediately started most mills humming again. Now that the hustle of the busy season's opening has practically been spent, activity settles down to an even, steady gait with plenty of business in sight. Every factor here is quite confident too, that a firm market with a sustaining demand will be a feature all through the balance of Fall and all Winter.

What is actually transpiring in the bonds and coated papers divisions may be indicated by the report that all mills are running at capacity with four to six weeks' business on books to be filled as rapidly as continuous production will permit. Much trade in these divisions is being conducted and still more in prospect. Printers, who were hard hit most all summer are back again for larger quantities and they evidence some profitable business on their books. Stimulated advertising as a consequence of returning prosperity all around, is making its mark in coated paper sales.

Encouraging Outlook in Coarse Branch

Like the high grades, coarse papers are having their fling at heavy demand. Kraft goes rapidly at good figures with no promise to new buyers but a six to eight weeks' wait for shipment. This represents the amount of orders which mills have already booked for future delivery. Wisconsin mills, which turn the larger share of kraft into this market, are kept running to capacity on this basis.

There is a noticeable slowness in chip board. It was expected that the box makers would be going full blast by this time, but apparently they have been slower in starting than was anticipated. However, it will in all probability be only a matter of a week or so until chip board will be as firm as the other kinds of board. Mills are operating also on stiff schedule to clean up the five to seven weeks' orders on hand.

Paper stock, which received a slight setback last week is coming back again. Everybody thought it would. The reaction was only the result of a fast increasing market which buyers sought to halt by holding off orders for a time.

Roofing stock has held firm at its present figure for several weeks. Consumers of it are in their busy season, keeping the demand at a fairly satisfactory level.

Program for National Paper Trade Meeting

In the past week the program for the semi-annual meeting of the National Paper Trade Association took form. The convention will convene at the Drake Hotel, Chicago, on Monday, Tuesday and Wednesday, Oct. 13, 14, and 15. The program is as follows:

Monday, October 13

10:00 a.m. Board of Directors.
4:00 p.m. Writing and Cover Conference Committee
4:00 p.m. Executive Committee (Wrapping)
Immediately following Conference Committee (Wrapping)
7:00 p.m. Conference Dinner (Wrapping)

Tuesday, October 14

9:30 a.m. Executive Committee (Fine Paper)
10:00 a.m. Wrapping Paper Division.
2:00 p.m. Fine Paper Division
3:00 p.m. Tissue Conference Committee
4:30 p.m. Paper Conference Board Committee
7:00 p.m. Paper Conference Board
8:00 p.m. Executive Committee (Wrapping)
8:00 p.m. Statistical Committee

Wednesday, October 15

10:00 a.m. Fine Paper Division
10:00 a.m. Wrapping Paper Division (Continued meeting)
1:30 p.m. Luncheon of National Paper Trade Association.

Master Firm Incorporates and Changes Name

Announcement has been made that the old Master Products Company, of 4420-4422 N. Western Avenue, has changed its name to the Master Paper Board Products Company, and incorporated with a capital of $5,000 to manufacture and deal in paper products and paper novelties. Officers of the firm, who are also the incorporators are as follows: President, Fannie D. Rest; vice-president, Alexander I. Rest; and secretary-treasurer, Samuel E. Sternberg. Legal papers were filed through Sonnenschein, Berkson, Lautmann and Levinson, Chicago.

Centralized Printing Trades Offices

Though only two months old, the Printing Trades Offices and Display, on the second floor of the Transportation Building, Dearborn and Harrison Streets is an assured success. This is an entirely new idea being worked out by the owner of this huge office structure for centralizing the offices of every branch of the printing industry in the Windy City. In other words, it is intended that this be a permanent office headquarters for printers machinery makers of all kinds, from the smallest to the largest units as well as paper makers. The display will grow as office space is taken and the occupants add their particular products to those already assembled.

Paper Firms Represented

Already there are two paper companies represented among those having office space. They are the West Virginia Pulp and Paper Company, a branch of the Chicago headquarters, and the Mid-States Gummed Paper Company, both of which have an elaborate display of printer matter descriptive of their various products.

Among others is the Golding Manufacturing Company, with main offices in Franklin, Mass. This firm has one of its new improved auto-clamp power cutters, set up for demonstration purposes, with Howard D. Salins, of the Chicago territory in charge. This cutter speeds up cutting operations for it moves just fast enough for the operator to prepare his feed while the knife is descending and rising. It will take stock up to four inches thick.

Other Firms Represented

Included in the rent of office space in the Printing Trades Offices and Display is towel service, telephone service, a switchboard operator, drinking water, heat, light and use of a conference room. Prices range from $35 to $50 per month and in time it is expected to be the biggest thing of its kind in the city. Already there are a number of firms in it, namely: the Chicago Composition Association, Friel and Friel, Golding Press Division, American Type Founders Company, Harlo R. Grant & Co., Latham Automatic Registering Company, Ludlow Typograph Company, Mid-States Gummed Paper Company, Murphy Specialty Company, United American Metals Corporation, Vandercook & Sons, Ulanz Cost Accounting Service, Post Envelope Press, West Virginia Pulp and Paper Company, Ben Franklin Publishing Company, Production Meter Corporation, Joseph B. Smythe Company, and the Ortleb Ink Agitator.

TORONTO PAPER BUSINESS SHOWED GAIN IN SEPTEMBER

Trade Predicts a Further Improvement Will Result During Present Month—George Carruthers Celebrates His Fifty-fifth Birthday—Explosion of Low Pressure Boiler Causes Loss at Plant of Lincoln Paper Mills—Pulpwood Business Dull and Prices Are Easier Than Last Year at This Time—Caithness Lumber Co. Successful Bidder on Timber in Township of Studholme.

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ontario, October 6, 1924.—The paper business is gradually picking up and the members of the trade are feeling a little better. When the majority of jobbers made up their returns for the month of September, they found that the results showed an increase over each of the previous three months. This refers particularly to flat papers. October should prove to be a better month than September. Business is still a long way from what it ought to be but the paper interests have come through the depression with less fatalities in a financial way than many other lines. Book and writing mills are fairly busy, but the one line, which does not pick up and seems to be the dullest of any, is coated paper stock. Consumers appear to be using super-calendered and less expensive lines and curtailing their printing and stationery bills wherever possible. In coarse papers, trade is also some better and wholesalers report that the turnover last month was about ten per cent ahead of what it was the previous one. Kraft paper is moving fairly well but some importations from Scandinavia are creating a little uncertainty regarding the situation.

Foreign papers such as onion skins, hand made covers and other specialty lines from Austria have been offered to local dealers during the last few days at considerably lower quotations than those prevailing at home, but most jobbers are sticking to the policy of buying Canadian made goods; in this regard placing patriotism before profit.

In the manufacturing stationery line, business is very fair in preparation for the coming holiday activities but the makers of envelopes are not as rushed as they should be at this time of the year. They report that business houses and manufacturing firms are curtailing all unnecessary correspondence, mailing lists have been more carefully pruned and not as many circulars and leaflets going out. This does not mean that the sending out of printed literature has ceased but its dissemination is more discriminating, in accordance with other little economies effected to reduce overhead expenses.

The printing trade is still rather sluggish and competition keen for all large sized jobs.

Congratulations to George Carruthers

Many friends in the paper trade extended their congratulations on September 29 to George Carruthers, president of the Interlake Tissue Mills Company, who celebrated his fifty-fifth birthday. Mr. Carruthers is president of the Canadian Pulp and Paper Association and some thirteen years ago organized the Interlake Tissue Mills at the head of which he has been ever since. He is also chairman of the International Committee on Text Books for the pulp and paper industry of Canada and the United States, and has always taken deep interest in technical education and Safety work in the pulp and paper mills of the Dominion.

Appointed New Eastern Representative

W. S. Barnes has been appointed Martime province representative, with headquarters at St. John, N. B., for Warwick Bros. and Rutter, manufacturing stationers and paper dealers, Toronto, succeeding Percy F. Annis, who has gone into the manufacturers' agency business. Mr. Barnes is well known to the trade in the east, having been associated for many years with Barnes & Co., manufacturers of blank books.

Airplanes Will Winter at the Soo

Construction has been started on the erection of a large airplane hangar at Sault Ste Marie, Ont. It is intended to have the fourteen Ontario government airplanes, which have been employed during the past season in forest patrol service, winter at Sault Ste Marie for repairs and general overhauling. The hangar will have an area of 80 feet by 350 feet, with a platform which will extend into the water, of 150 feet by 200 feet, and will be built of steel and tile.

Paper Mills Suffer Serious Loss

Owing to the explosion of a low pressure boiler the jute and rag department of the Lincoln Paper Mills, Merritton, Ont., was destroyed. The building was wrecked by the force of the explosion, the thick wall of which was shattered and the shafting and pulleys sent in all directions. The boiler was carried a distance of several hundred yards. There was no one in the building at the time and the loss is estimated at $10,000.

Pulpwood Business Continues Dull

Pulp and paper mills are holding back in the matter of making contracts for pulpwood and the market is quite dull, with prices easier than last year at this time. In the Port Arthur distict, it is understood that the Provincial Paper Mills Company and the Great Lakes Paper Company, will be in the market for several thousand cords but otherwise local concerns are well supplied. It is not likely that a big cut will be taken out during the coming winter unless things materially improve in the pulpwood line during the next few weeks and regarding this, prospects are not very bright, according to the best informed authorities.

Secure New Pulpwood Limits

The Caithness Lumber Company of Toronto, was the successful bidder on the timber in the township of Studholme, 81 square miles in area, in connection with the recent sale conducted by the Department of Lands and Forests of the Ontario Government. The price realized for the pulpwood was slightly in excess of the upset figure placed on the wood by the Government when calling for tenders. There is no pine on the limit sold, and the following prices were accepted for the kraft and paper pulp as follows: Jack pine $5 per M feet; poplar $3.25; spruce pulpwood $1.35 per cord, and other pulpwood 95 cents. These figures are inclusive of Crown dues. The Caithness Lumber Company has a mill operating at Hazel, Ont., and is conducting extensive spruce operations in Irish township, district of Temiskaming, where several million feet have been sawn during the past season. It is learned that the company will extend its milling facilities in this area.

Notes and Jottings of the Industry

Edward Beck, of Montreal, secretary of the Canadian Pulp and Paper Association, was in Toronto last week on a visit to George Carruthers, president of the association.

E. S. Munroe, of Wilson, Munroe County, Toronto, and treasurer of the Canadian Paper Trade Association, spent a few days in Montreal lately on business.

Hundreds of cords of pulpwood, some of it cut as long as two years ago and regarded as lost by stranding along the banks of the rivers in the Porth Arthur district, have been carried out by the swollen waters resultant from recent rains.

F. L. Ratcliff, president of the Ratcliff Paper Company, Toronto, spent a few days in Montreal last week on business.

The Howard Smith Paper Mills are sending out to the trade samples of a new finish in Belfast bond suitable for lithographic work. Belfast bond parchment, the firm announces, is now being carried in several new sizes.

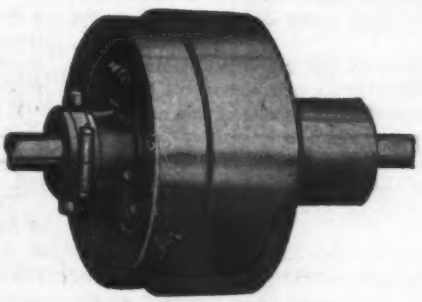
John B. Piper, of the Provincial Paper Mills Company, who has been spending his holiday at various points in Ontario, has returned to Toronto.

FINE WORKMANSHIP PLUS FINE MATERIALS and CORRECT DESIGN

There is a big difference between a suit of clothes and a Friction Clutch, but remember, a fine piece of cloth doesn't necessarily mean a first-class suit. Is it made right? That's the question. This same line of reasoning applies to a Friction Clutch. The three ingredients for perfection mentioned at the head of this advertisement, plus our 39 years' experience in the making of Friction Clutches and our guarantee of satisfactory operation stand back of

"MOORE & WHITE" FRICTION CLUTCHES

The fact that there are more than 200,000 "M & W" Clutches in use in all parts of the world driving machinery of every description SUCCESSFULLY, particulary in paper mills where Clutches are subjected to 24-hour service, offers indisputable proof that they stand SUPREME in their line.



Complete Information Upon Request

THE MOORE & WHITE CO.

Builders of Clutches since 1885

North Philadelphia Station, Pennsylvania Railroad, Philadelphia, U. S. A.

PAPER DEMAND IN BOSTON GROWS MORE ENCOURAGING

Printing Papers Especially Are Active with Many Paper Concerns in This Line Planning Promotional Campaigns to Assist in the Proper Distribution of Their Products—Kraft Situation Unimproved with Prices Showing Little Stability—New England Box Makers and Supply Men Hold First Weekly Luncheon at Rich's Grill—Geo. H. Morris, Jr., Joins Sales Organization of Carter, Rice & Co.

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., October 6, 1924.—October business has started in with a very satisfactory volume and the week as a whole has been a very excellent one. The large number of smaller establishments which were closed during the Jewish holidays affected the jobbing sales but this simply means that the work has piled up and the orders will be forthcoming after a few days' delay.

All printing papers are active and many fine paper firms are planning promotional campaigns to assist in the work of proper distribution for their products. This demand is of course reflected in the sales of high grade cover stocks and envelopes for advertising purposes. One of the large independent and specialty envelope makers of Boston stated that never before in his history had there been such demand for high grade special envelopes as this year.

The imports show only limited arrivals this week both in pulp and in old rags. One noticeable incident is a shipment of old magazines from Vancouver British Columbia to Philadelphia consignees.

Kraft Situation Not Improved

The kraft situation seems unimproved and prices have little stability. The specialty mills are considerably affected by the general business condition and such items as gummed tape, tissue, etc., are slower in demand while keeping pace with the needs of the trade. Cotton twines are due for a slight advance within the next week and mills are now taking blanket orders for the balance of the year with deliveries specified before December 1, 1924.

General News of the Trade

Fred Hamilton of the Hamilton Paper Company, Portland, Me., was in the Boston market this week calling upon his representatives here.

W. H. Lloyd, sales manager of the Dill & Collins Company, Philadelphia, was at the John Carter & Co. new warerooms this week inspecting the facilities arranged for taking care of this line.

The Robert Gair Company is reported to be making some extensions and repairs to its box plant in Haverhill, Mass., with a view to increasing its output and facilitate the better handling of its products. C. A. Mulqueeny from the Brooklyn headquarters is here attending to this work.

The first weekly luncheon of the New England Box Makers and Supply Men was held at Rich's Grill, 153 Federal street, Boston, on October 2 at 12.30. These meetings are to be continued weekly in roundtable form and it is believed that this get-together movement will be the means of cementing business and friendly relations with the various members of the trade.

T. E. Watson, familiarly known as "Teddy" is now with Green, Low & Golge. He was formerly connected with the Seaman Paper Company.

J. B. Jones, director of purchases for the Western Newspaper Union, Omaha, Neb., has been in the East with N. K. Woodward, Director of Purchases for the Midwestern Newspaper Union, Kansas City, Mo. Mr. Woodward was accompanied by his family and the entire party are traveling by automobile and combining business with a delightful pleasure trip.

The Geo. W. Wheelwright Paper Company is featuring a new paper with an English finish called "Best" plate.

George H. Morris, Jr., has joined the sales force of Carter, Rice & Co. and will concentrate on the wrapping paper department sales. He was formerly with the H. J. Dowd Paper Company of Boston.

W. J. McLelland, manager of the cardboard department for Carter, Rice & Co., and well known to thousands of paper men throughout the country, abandoned the ranks of bachelorhood last week when he married Miss Lena MacDonald, formerly chief of the stenographic division for the same firm. The wedding took place at the home of the bride on Wednesday evening, October 8. Mr. and Mrs. McLelland left for a fifteen-day motor trip through the Berkshire country after which they will take up their residence in Lexington, Mass. Both Miss MacDonald and Mr. McLelland are long-service employees with Carter, Rice & Co., and their many friends there wish them much joy and happiness and consider this the culmination of a very happy romance.

Offers Support to Receiver Willson

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., Oct. 7, 1924.—A committee of the Holyoke Chamber of Commerce paid an informal visit this week, headed by Joseph B. Weis of the Perfect Safety Paper Company, to Sidney L. Willson, president of the American Writing Paper Company, to assure him of the desire of the chamber to be of any assistance that was practicable in the troubles of the big Company, and to express the goodwill of the Chamber to that Company. Mr. Willson later gave out the following statement:

"I wish to acknowledge for myself and my associates the very courteous expressions of good will and the offer to render any assistance within its power to further the interests of the Company given me by Messrs. J. B. Weis, Thomas S. Childs, Robert E. Barrett and Conrad J. Hemond, representing the Chamber of Commerce. It is most gratifying to know and to have oral assurance that the efforts of the receiver and his associates have merited indorsement and approval.

"The recent foreclosure proceedings instituted by the Old Colony Trust Company was an action necessary in carrying out reorganization plans, and was welcomed by the receiver as an evidence of activity on the part of those interested in the rehabilitation of the Company.

"Our entire organization is very optimistic because the future possibilities have been carefully analyzed and it is with confidence based on the knowledge and experience of the past year that we predict for the Company a bright future.

"I am sure it is the hope of your organization that this Company shall finally attain success and reflect credit to the city of Holyoke and to the paper industry because, when we shall have attained that end, we shall also have contributed to the prosperity of the city.

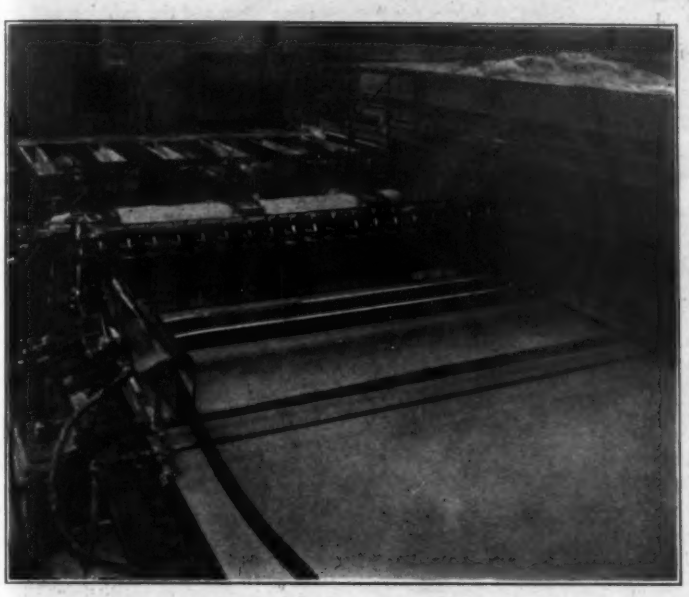
"The collective and personal assurances received from the citizens of Holyoke and the Holyoke Chamber of Commerce have stimulated us in our efforts and have made easier the solution of some of the difficult problems encountered and we desire in this manner to express our appreciation and thanks to the members of your organization."

I. P. Names $70 Price for News Print

J. L. Fearing, sales manager of the International Paper Company makes the following announcement: "Effective January 1, 1925, and continuing through 1925 the International Paper Company's price for expanded roll news to its contract customers in United States will be $70.00 per ton F.O.B. Mill.

"We are making this announcement earlier than usual at the special request of many of our customers who wish to know their costs as far in advance as possible."

your PAPER



How to Improve its Quality

Every manufactured article is open to improvement and the paper made in your mill is no exception. It is our purpose to show you how this can be done at an actual lowering of the cost of production. Our plan for improving your paper makes possible the manufacture of a sheet of absolutely uniform thickness across the entire width of your machine. It, moreover, gives your paper better formation and eliminates foam and lumps. This is done at an actual and substantial saving in cost. All that is necessary is the installation of a Voith High Pressure Stock Inlet. This new equipment not only makes possible all of the above-mentioned improvements but also increases production, eliminates slices and aprons and as a result saves in time, does away with a great deal of bother and prevents much wear on fourdrinier wires.

4 Improvements

1. Paper of Uniform Caliper.
2. Paper without foam spots and lumps.
3. Rolls made with fewer breaks.
4. Paper made with better formation.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Avenue

free

An attractively illustrated booklet giving full particulars regarding the Voith High Pressure Stock Inlet is just off the press. Your copy is waiting for you. It is yours on request. Write for it today.

You will be interested in what the booklet tells of the experiences of other manufacturers with the Voith Stock Inlet. The accompanying illustration pictures one of the installations mentioned in the book. It is operating on a large book machine in a New York Mill, and not only resulted in paper of better formation and more even thickness, but increased production 10%.

Another experience is that of a Wisconsin mill where an improvement of 75% in caliper variation was gained immediately upon installing a Voith Inlet. The booklet gives more particulars regarding these and other instances.

Write for your copy of the Voith Stock Inlet Booklet today. Post yourself on one of the latest forward steps in paper manufacture.

New York Trade Jottings

The joint committee on Approved Chemists of the American Paper and Pulp Association has approved for listing Prof. Paul De-Costa Bray of the University of Maine, Orono, Me.

* * *

R. S. Kellogg, secretary of the News Print Service Bureau, will be in attendance next week Tuesday and Wednesday at the meeting of the Technical Association to be held in Buffalo.

* * *

G. A. Ware, assistant secretary of the News Print Service Bureau, was in attendance at the annual convention of the National Association of Cost Accountants recently held in Springfield, Mass.

* * *

George W. Sisson, Jr., president of the Racquette River Paper Company, was registered at the Hotel Belmont the early part of the week, leaving on Wednesday to be in attendance at the American Forestry meeting which is being held in Washington today.

* * *

Dr. Hugh P. Baker, executive secretary of the American Paper and Pulp Association, was in Washington last Friday making tentative arrangements for the next meeting of the Hoover advisory committee which will be held on November 19.

* * *

Paul Naucke, the chief technical director of Aschaffenberg, Germany, will arrive in this country by S. S. *Columbus* tomorrow, for a brief visit. The Aschaffenburg organization is composed of several pulp mills variously located in Germany, and is represented in the United States by the Hartig Pulp Company, Inc., of 247 Park avenue, this city.

* * *

Dr. Hugh P. Baker, executive secretary of the American Paper and Pulp Association, left this week for the west where he will visit various mills. Yesterday he was at Kansas City attending the meeting of the National Resource Production Committee of the United States Chamber of Commerce which is also in session today. M. E. Marcuse, president of the Bedford Pulp and Paper Company and chairman of the committee, is also in attendance at the session. Next Tuesday Dr. Baker will be at Chicago in attendance at a meeting of the executive committee and advisory council of the American Paper and Pulp Association, held in connection with the convention of the National Paper Trade Association.

J. Kindleberger Visits San Rafael Paper Co.

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., October 8, 1924.—Jacob Kindleberger, president of the Kalamazoo Vegetable Parchment Company, has just returned from a friendly junket to Mexico, being one of a party made up of members of the American Exporters Association. While Mr. Kindleberger's stay in the land south of the Rio Grande was rather brief, it was long enough for him to see the evil effects of militarism developed to the highest point.

Mr. Kindleberger saw "things" as well as "folks" during his stay in Mexico. One of his most interesting sight-seeing trips was to the great mills of the San Rafael Paper Company, which are located in the mountains about 50 miles from Mexico City. On this tour he was accompanied by W. J. Lawrence, vice-president and general manager of the Western Paper Makers Chemical Company. Mr. Lawrence has been selling size to the Mexican concern for years and on the recent trip placed an order, said to approach $40,000 in value.

"The San Rafael Paper Company which makes enormous amounts of wrapping paper, plans to size that product in the future," said Mr. Lawrence. "They will save much raw material as a result. The mills of this concern are located at the base of Mount Popocatepetl, a most sightly location."

In speaking of the concern and its operations, Mr. Kindleberger said: "The main mill is built on the side of a mountain and is what is known as a gravity mill, making it possible to handle all stock without pumping as most of the mills in the United States do.

"At the highest point is the wood room, where the pulp is made. They use some native timber, but that is generally of poor quality and has to be mixed with foreign sulphite to secure the right consistency. Step by step below in order are the washing room, bleaching room, beater room, machine room and the finishing and shipping rooms.

"Seven paper machines are operated in the main mill and three in the second mill, which makes a very high grade of bond paper. Two of the machines are running 700 feet a minute on wrapping paper. I have never seen a finer or more efficient mill. The management has gone to extremes in the matter of system. There are over 500 forms in use in the various departments. Every ounce of fiber, every gallon of water and every pound of steam must be accounted for. It is possible to lay their hands on any waste in any department of the plant.

"In addition to the mills proper, this concern maintains a machine shop, foundry, and carpenter shop, all of the highest type. The mills are built of stone and surrounded by high stone walls, largely as a matter of protection. Watchmen fully armed are in evidence everywhere, while everything used in the mill is kept under lock and key with a heavy guard posted.

"The village in which the mills are located are owned by the company and I am glad to say that much has been done to make life agreeable for the 1,500 employees in the plant. Conveniences are numerous and the workmen seem to be of a far higher type than one usually sees in that country. While Mexicans are hard to teach, they make good workmen when educated. Just now labor troubles are looming for this concern. Only the week before we arrived the company was forced to pay a union labor leader 2,000 pesos to keep away a strike."

Al Reeves Addresses Paper Salesmen

"Salesmanship is the art of arousing in a potential purchaser the desire to possess the particular article that the slesman has to sell," said Al Reeves, manager of the National Automobile Chamber of Commerce before the Salesmen's Association of the Paper Industry, at the weekly luncheon, held at Hotel Belmont, Monday.

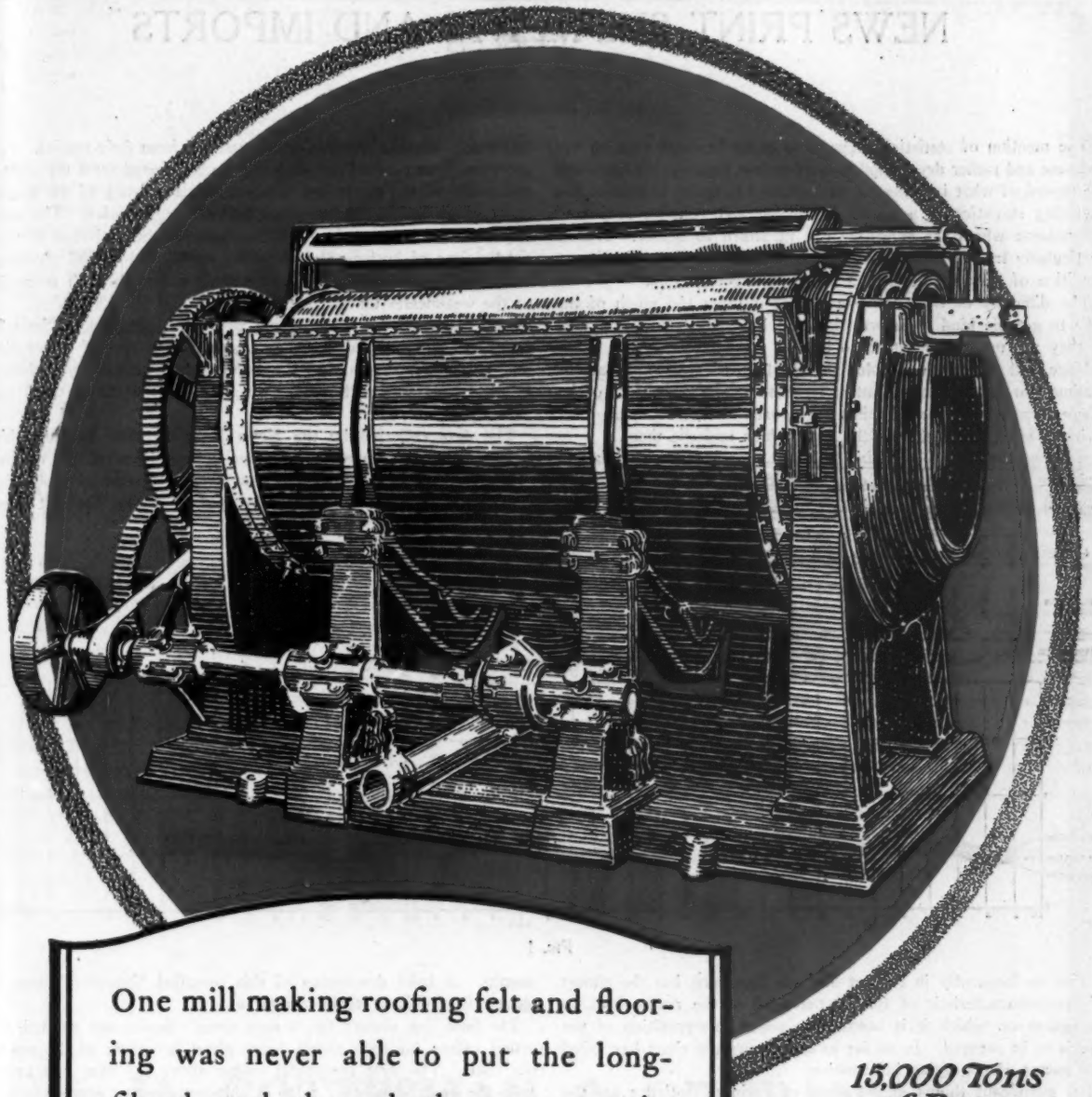
Mr. Reeves was discussing Salesmanship in the Automotive World, and made some interesting observations on the methods used by that industry to develop fertile fields.

"Show the public how to use paper in new ways, and you will not have to worry about your market," he said. "The way to develop a market is to find out where paper is used and how, and then to discover how it can be used in new ways. When this is done, the purchaser will be coming to you for more paper, and your market will be wonderfully broadened.

"After all, the greatest business problems before any concern are those of sales and distribution. And this applies not only to the individaul company, but to the whole industry of which that company is a part. In the automotive field we work out potential fields fot the use of motor cars. After having worked out the potential market then it is up to the livest individual concern to take advantage of the opening thus developed. We make the opening, and the company makes the sales. The same should be true in the paper industry, or in any other industry."

To Discuss Forest Laboratory Work

The work of the Forest Products Laboratory at Madison, Wis., will be discussed at a meeting of the sub-committee for the Laboratory to be held at Madison on November 17, it was announced by Dr. Hugh P. Baker, executive secretary of the American Paper and Pulp Association, this week. The members of the committee have also been invited to make their plans to remain over the following day, November 18, to witness the football game between the Wisconsin and Minnesota Universities.



One mill making roofing felt and flooring was never able to put the long-fibred stock through the screens satisfactorily—until they installed Bird Screens.

15,000 Tons of Paper pass through Bird Screens Daily

BIRD SCREENS

BIRD MACHINE COMPANY
SOUTH WALPOLE ~ MASSACHUSETTS

BIRD MACHINERY
7091

NEWS PRINT SHIPMENTS AND IMPORTS

A Graphic Analysis

By W. Herman Greul*

The mention of statistics suggests to many business men an unwelcome and rather dry compilation of useless figures. Nevertheless the record of what is going on, as contained in trade, industrial and operating statistics, is a highly interesting and valuable source of information which the executive can ill afford to ignore. This is particularly true in the present, and what promises to be the future condition of keen industrial and commercial competition.

The difficulty of the executive is that it takes too much of his time to get the kind of information that he needs from the figures as they are usually presented to him.

More and more, the graphic presentation of statistical data is coming into use by the student of business activities, because of its inherent capacity for condensing the figures and at the same time giving a vivid impression of the facts which underlie them.

Many of the efforts to utilize the chart as a business tool fail to capitalize fully this means of conveying information, and often they result in fallacious and misleading impressions. The ordinary chart as seen so frequently in current business literature, has the almost universal characteristic of forcing the mind of the reader back to the figures on which it is based, if a sound interpretation of the data is to be secured. In so far as this occurs the chart has failed as a means of conveying information.

The significant things in the study of business statistics are the *relative* values and *relative* changes that are revealed and the trends or underlying tendencies which may be discovered.

It has been aptly said that statistical work is "a study of the past, in the light of the present, as a guide for the future." If such a study is to be made a practical thing for the busy executive, through the medium of graphic pictures of business activities, it is essential therefore, that first, the relative values rather than absolute values shall be presented, second, standardized methods of charting must be employed and third, the trends or tendencies of the activities under consideration must be easily seen and quickly grasped.

Many do not realize that these requirements have been met by an organized and comprehensive method which has been applied with very illuminating results to a wide range operating data and to general trade and business statistics.

Economists and statisticians have long realized the existence of recurring, cyclical changes in the movements of business-at-large and much valuable information has resulted from their studies. Few, however, have realized the advantage to be secured from the analysis and study of the cyclic and seasonal characteristics of the smaller trade group and of the individual business organization. The application of the above referred to methods, to the activities of these subdivisions of business, has revealed many well-defined characteristics and pointed the way to extensive savings through correction of the weaknesses that were thus revealed.

The limitations of space do not permit a discussion of the principles that are involved, nor the extended illustration of the application of these methods, but the accompanying charts will show a few instances that will be of interest to the readers of the Paper Trade Journal.

The data collected by the News Print Service Bureau, which cover practically the entire news print production of the country, afford the material for Fig. 1, showing the relation of production, shipments and mill stocks of this product during the last thirty months. A brief description of this so-called "inventory" type of chart will facilitate its interpretation.

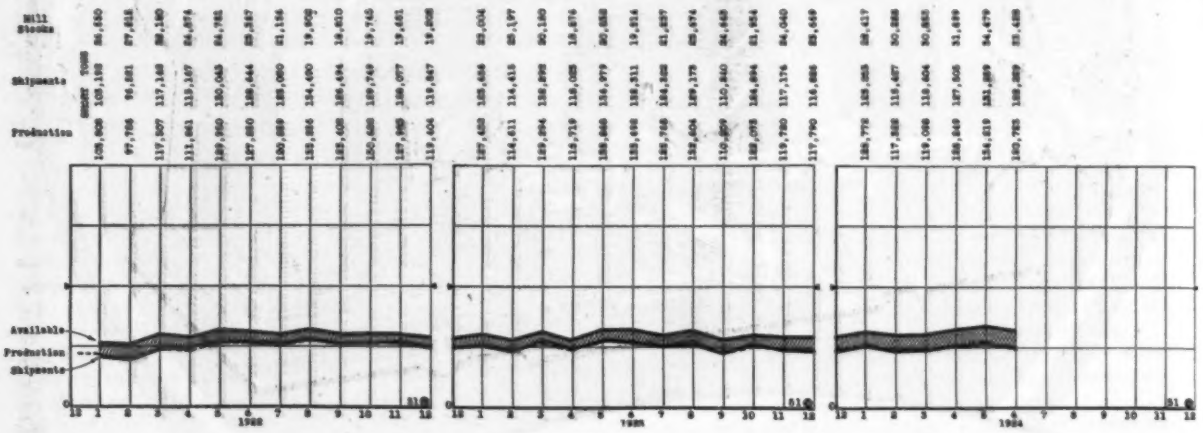


Fig. 1

The base line always has a zero value. Scales are omitted, the actual values for each month being given in figures at the top of the chart. The first horizontal ruling above the base line represents the average monthly value of shipments during some reference period (in this case the calendar year 1922). The lower solid curve shows the monthly fluctuations of shipments above and below this average, while the dotted line gives the corresponding monthly values of production.

The upper solid curve marked "available" has a height above the base line proportional to the mill-stocks on hand at the start of the month plus the production of the month. The thickness of the shaded strip therefore is directly proportional to the stocks on hand at the end of the month.

This type of chart has a feature which is often overlooked by the casual reader. The thickness of the shaded strip (stocks) at any month can be readily compared with the height of the shipment line above the zero base line of the chart and the amount of stocks on hand, in *terms of current demand*, can be quickly approximated. Thus at the end of June of this year it is seen that stocks represented approximately one quarter of the current month's shipments —the width of the shaded strip is about one fourth of the height of the shipment line. Last year, as well as in 1922, the mill stocks

* Consultant in the analysis of business operations, New York. Copyright of charts reserved to the author.

Established 1886

L. O. W.

Having chartered a number of steamers to bring pulp supplies for our customers by Last-Open-Water from abroad for consumption during the coming Winter we offer the use of these facilities which may save you considerable money.

We have splendid proposals to make on good qualities of Bleached and Unbleached Strong Sulphite, Mitscherlich, and Kraft Pulps; alsc Wet and Dry Ground Wood.

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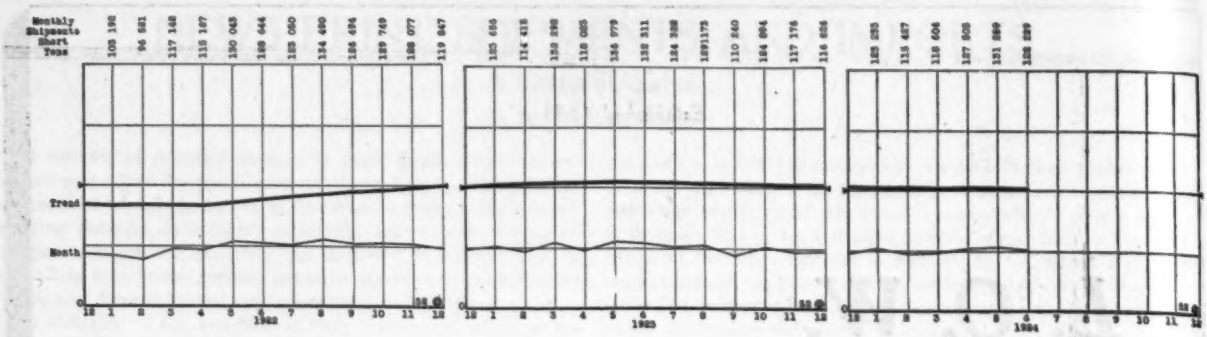


FIG. 2

at the end of June were about a sixth of the current monthly demands at those dates.

Mill stocks have been slowly increasing since last October as shown by the gradual widening of the shaded strip since then. Observe also the nearly horizontal movement of the shipment line with only moderate deviation from the horizontal reference line representing the average of 1922. This indicates a lack of the strong seasonal variations which are characteristic of many of our industries. Note also how close the "Production" line (dotted) follows that of "Shipments," lending confirmation, if such were needed, of the general policy which prevails, of producing on orders rather than for stock, the consumers carrying the necessary stocks to insure against the interruption of publication on schedule.

A somewhat different form of chart is shown in Fig. 2, the main purpose of which is to visualize the general *trend* of shipments as distinguished from the monthly fluctuation, the latter, however, being shown by the lower light line which is similar in its movements to the shipment line of Fig. 1.

The *trend* line, which is computed from the actual monthly figures which are given at the top of the chart, automatically eliminates such seasonal changes as may exist due to the difference in the length of the month, regular holidays, etc. It brings out the general or long-pull tendency of the activity under consideration, in this case the mill shipments of news print.

Following this trend line from the left of the diagram it is at once seen that, beginning with May, 1922, there was a general upward tendency throughout the balance of that year and the first half of 1923, but with a gradually diminishing rate of increase. This was followed by a slow but steady drop during the latter half of 1923 and a practically horizontal movement during the current year in harmony with the general business situation.

It will be of interest now to note the possibility of direct optical comparison with other data, which is afforded by these standardized trend charts. Fig. 3 shows both the monthly fluctuation (by the light line) and the general trend of net imports of news print into the United States, based on the reports of the Department of Commerce.

Following the trend of net imports, beginning at the left of the diagram, it is seen that this was increasing during the first four months of 1922 while mill shipments were stationary; that the upturn of the latter was accompanied by more rapid increase of imports for two months, followed by a little slackening of the rate during July and August. This in turn was followed by another more rapid upturn which continued all through 1923 but which is slowing down to a steady movement this year.

The more rapid increase of imports during the entire period of two and a half years suggests at once the reason, at least in part, for the downward trend of mill shipments in recent months.

Observe that net imports in May of this year were approximately 30 per cent higher than at the end of 1922, whereas mill shipments in May were at about the same level as at the end of 1922.

A significant feature of these trend lines is that in general they change their direction only very gradually and therefore give an approximate indication of what to expect in the near future.

Obviously the two factors under consideration do not tell the whole story and price movements, freight charges, labor costs, etc., are needed to give a more complete picture of the working of the economic law in the industry. The limited pictures presented, however, do illustrate the ease with which significant information may be obtained quickly from masses of figures by the use of standardized and co-ordinated charts.

The annual meeting of the Fort William Paper Company, Fort William, was held in Toronto lately and a satisfactory report for the past year was presented. The old officers were re-elected as follows: Chairman of the Board, George H. Mead, Dayton, Ohio; president, Col. Thomas Gibson, Toronto; vice presidents, George R. Gray and Col. C. H. L. Jones, Sault Ste. Marie, Ont; secretary, J. G. Gibson, Toronto; treasurer, D. G. Calvert, Fort William.

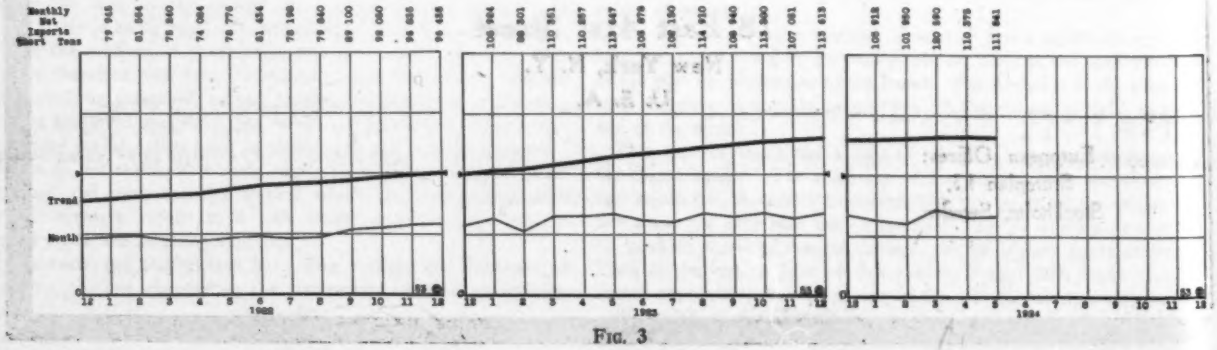


FIG. 3

Injurious Heat and Power Waste Develop when the Oil film is broken.

The New Beloit Bearing Maintains a Copious Film, Largely Eliminating Necessity of Water Cooling. A Simple, Rugged Bearing for All Places on the Paper Machine.

Beloit Iron Works — Established — **Beloit, Wis., U.S.A.** — Since 1858

On Nov. 4th, 1920, 26,000,000 people voted, BUT 27,000,000 did not. VOTE NOV. 4th. VOTE AS YOU PLEASE, but VOTE.

Editorial

Vol. LXXIX New York, October 9, 1924 No. 15
HENRY J. BERGER, Editor

NO PAPER SHOW FOR 1925

The announcement that there will be no paper show in 1925 will cause considerable disappointment throughout the paper industry but there is a bright side to the news which should bring consolation to those who are inclined to grieve the most over the 1925 omission.

It has been found that the dates selected for the annual convention of the American Paper and Pulp Association would make it impossible to hold a paper show in conjunction with the convention. Unfortunately exposition space at the Grand Central Palace would not be available for those dates. As it is inadvisable to think of holding a paper show except during convention week and as the Grand Central Palace is considered the most favorable place to hold the show there has seemed to be no alternative except to give up plans for the show in 1925.

But the bright side of the news is this. It is intended to hold a show in 1926 and to make it a bigger and better show than the paper industry has ever dreamed of holding. Work on it will be started early and every effort will be made to put on a paper show so good that it will make up for the omission of one in 1925. It seems a long ways off, it is true, but it is not too far off to start talking about and to start off working up enthusiasm for.

A paper industries exposition is beneficial in many ways to the paper industry. That has been proven by the shows already held. That the shows will become more helpful and more interesting as time goes on is a certainty. If the omission of a show in 1925 should permit interest to die out it would prove a disastrous omission but if it results in a bigger, better and more interesting show in 1926 the fact that a year has been skipped will not be serious.

Everybody connected in any way with the paper industry should realize the possibilities of a paper show. Everybody from the biggest factor to the smallest should give what help he could for such a show, even though that help might not be any more than his mere moral support. The proposition should not want for willing hands to make it a success and it should not be necessary to have to drag those who are able to support it and who should support it into giving that support.

The paper industry is a big industry—an industry that is constantly growing and which has a bright future ahead of it. A show representative of that industry should be a worthy one—just as good as the industry can make it.

The 1925 show will undoubtedly be missed. Many expressions of regret will be heard during convention week that none is being held but it is hoped that that will only stimulate interest in the big show that will be held in 1926. Let's start now pulling for it—dropping a word here and there where it will do the most good and keeping it in mind constantly. Time moves rapidly and almost before we know it another year will have swung around and it will be time to get down to actual work for the greatest paper industries exposition ever held.

WORK OF THE IMPORT COMMITTEE

The import Committee of the American Paper Industry, it is gratifying to learn, has been planning its course with great care, both as to the field to be covered and its method of operation in checking the abuses in the importation of paper which, according to apparently well authenticated reports, have been altogether too flagrant for some time past. The committee in its formal announcement to the paper industry of what will be necessary if these abuses are to be checked says:—

"Justice to the paper industry in this country and its self-preservation as well demand that it take concerted action to stop the violations of the law involved in the fraudulent and unfair practices in the importation of paper made in foreign countries."

"European countries are already expanding their industries for the purpose of paying their debts in exported goods," the letter continues. "With the Dawes plan in operation, economists state that exports of paper from Europe will be greater than ever. It is the intention of this committee to see that present and future imports of European paper are strictly in accordance with the law.

"While this committee has been in existence only a short time, it has already uncovered many violations of the law. For example, writing paper has been coming in misclassified or undervalued, and thus evading the proper duty. Wrapping and book papers are being imported in the same way. Much paper of higher grades has evaded the payment of any duty at all, being classified as news print. These are merely a few instances.

"It would not be only unfair, but obviously impossible for a few manufacturers to bear the entire burden of this undertaking. As every paper manufacturer will profit by this work, each one should stand his proportion of the cost, and we are sure that each one wants to do so. This is your fight."

It is announced that the response to this call to action by the paper industry has been exceedingly gratifying to the committee. By supporting the movement generously paper men will be serving their own best interests.

TRADE ASSOCIATION ACTIVITIES

A committee of the Chamber of Commerce of the United States, headed by President Richard F. Grant of that body, last week conferred on trade association activities with the Federal Trade Commission, Attorney-General Stone, and Secretary of Commerce Hoover.

It is understood that the conference was very preliminary in character and only to lay the matter before these goverment officials, but opening the way for further conferences, probably to be held the latter part of October.

The committee laid before the officials, it is said, the results of the trade association referendum taken last year by the National Chamber. In this connection it is interesting to note that some 300 trade associations are members of the national body.

Following the conferences, President Grant said that the National Chamber believes that legitimate trade associations perform a great public service and the desire is to find out, if possible, just what a trade association can or cannot do under the Sherman Law. What the trade associations want, he said, is a note of reassurance from some government department. They are not anxious for a court test

case unless that is absolutely necessary. There is no question, he said, but what the government wants to be of assistance to such associations as are within the law.

The committee attending the conferences on behalf of the Chamber of Commerce, in addition to President Grant, included: Milton E. Marcuse, president of the Bedford Pulp and Paper Company, Richmond, Va.; George Rublee, of this city, former member of the Federal Trade Commission; Alfred Reeves, of the National Automobile Chamber of Commerce, and Elliot H. Goodwin, vice-president of the U. S. Chamber of Commerce.

Alaskan Paper Industry Linked with Water Power

It is only a question of time when the shortage of news print paper stock in the United States and Canada will compel the manufacturers to go to southeastern Alaska for their pulp timber, declares J. C. Dort, Hydroelectrical Engineer of the Forest Service, United States Department of Agriculture, in his recent report on water power in Alaska. The report has just been published as a public document by the Federal Power Commission, Washington, D. C.

The two National Forests in Alaska, declares Mr. Dort, can produce about 2,000,000 cords of pulpwood every year for all timber under scientific forestry practices. Translated into paper this means an output of 5,000 tons of paper every day. Execellent water power sites are abundant in southeastern Alaska, the report states.

Under the procedure adopted by both the Forest Service and the Federal Power Commission the sale of timber and the leasing of power sites are linked together, the National Forest areas having been allocated to provide ample timber supplies for all time to cover any possible needs of arising from leasing water power sites located within such forest areas.

The Federal Power Commission's report on Alaska's water power and the available supplies of timber coincides with the statements made by the Forest Service in its recent publication on the pulpwood situation in the United States. This latter report pointed out the availability of both timber and water power sites in Alaska and urged consideration of that region as a big factor in meeting the present and future pulpwood requirements of the United States.

"Recent surveys show," the water power report declares, "that the Forest Service's early rough estimate of 70 billion board feet as the amount in the Tongass National Forest was conservative. With large timber supplies that can be made to produce 2,000,000 cords of pulpwood annually on the sustained—yield basis, or roughly, 5,000 tons of paper a day, with thousands of miles of sheltered inland waterways that favor economical logging and transportation, and with large resources of water power that can be developed at a relatively low unit cost, the prospects of a rapid and substantial growth of this new industry in southern Alaska are bright indeed."

Visits Swedish Pulp Mills

Nils R. Johaneson of Johaneson, Wales & Sparre, wood pulp agents of 16 East 41st street, New York city, has returned from an European trip of two and a half months' duration, most of which time was spent visiting the pulp mills of Sweden and Norway.

Mr. Johaneson says that the Swedish mills are practically sold out at the present time. Some of them have a small tonnage left but the amount is very slight. It seemed to be the general opinion encountered by Mr. Johaneson that these mills will find a better market next year all through Europe and especially in England than they have had this year. He found the pulp men all very optimistic that their market in 1925 in this country as well as in other countries would be considerably better than it has been this year.

Mr. Johaneson says that while there has been little if anything in the way of new mill construction in Sweden during the present year there has been considerable expansion work which testifies to the thrift and prosperous condition of the industry.

To Improve Reading Paper Mills

[FROM OUR REGULAR CORRESPONDENT.]

READING, Pa., October 6, 1924.—In order to bring about a more economical management, operations have been started by the Reading Paper Mills on the enlargement of the Packerack plant of the concern at Third and Bingaman streets, preparatory to the consolidation of that unit of the industry and the one at Front and Court streets. Heber Y. Yost, the secretary and treasurer, said the three buildings of the latter would be placed on the market in a short time and that possession can be given by January 1 next.

Mr. Yost stated that the Packerack mill, after the improvements are completed, will be large enough to take care of all the machinery and other equipment of the plant at the foot of Court street and that the owners of the manufactory will continue to make the same high grade of book paper as in the past.

The main improvement at the Packerack mill will be a new four-story brick and concrete structure and will be attached to the northern end of the two-story brick building, 120 by 200 by 80 feet, that was erected by the late George F. Baer, the owner of the business, about 18 years ago. The new operation will be 90 by 65 feet in dimensions and will be modern in every respect and very substantial. Another improvement will be the enlargement of the machine building in order to accommodate the machinery that will be transferred from the unit that will be abandoned. It has not yet been determined whether the offices will be located in the enlarged structure or another building erected for that purpose. The contractor is Charles H. Schlegel, of Mt. Penn, and it is estimated the work will cost $150,000.

The extensive addition will be finished by next February, it is anticipated, and the mill will be ready for the machines from the unit at the foot of Court street by the middle of December, it is expected. The latter turns out 10 tons of paper every 24 hours and the Packerack 20 tons of the same grades in that time. There are probabilities that by reason of the economical arrangement the present combined tonnage of 30 tons can be increased. The Packerack was selected for the consolidated plant because of the superior facilities of the location, especially in the matter of space.

Part of the unit at Front and Court originally was a whisky distillery and the manufacturer of paper began there many years ago. The buildings that will be offered for sale and which are well adapted and splendidly located for warehouse manufacturing purposes are as follows:

Two-story storage at the northeast corner, 260 by 90 feet, main structure, southwest corner, two stories, 260 by 90 feet, and the rag department, southeast corner, one story, 120 by 140 feet.

The Reading Paper Mills also includes a plant in Glenside, near where the Tulpehocken enters into the Schuylkill. Rope paper, which is used in making sand paper, is manufactured at this place, which turns out five tons of the material every 24 hours.

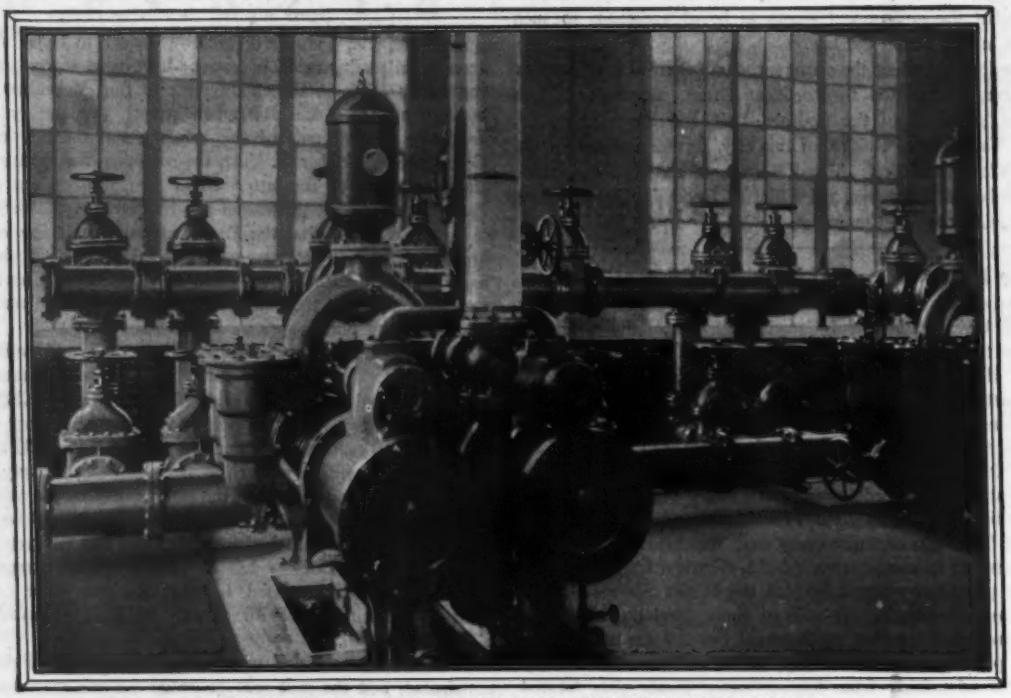
William Griscom Coxe, of Wilmington, a son-in-law of the late George F. Baer, is the president of the mill. James M. Miller, who has been connected with them for 45 years, is vice president and general manager.

H. E. Walker, who came here from Wilmington 18 months ago, is assistant manager.

Pulp by Water Routes to Western Mills

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., October 7, 1924.—Shipments of pulp by all-water route from Sweden to mills in the Middle West are now being reported. Toledo recently reported the arrival of a steamship, loaded with pulp from a Swedish port, the entire cargo being consigned to the Consolidated Paper Company, Monroe. Now Milwaukee chronicles the arrival of the steamer Popular Bay with pulp for Wisconsin mills. In the latter case the cargo was reloaded at Montreal. Two other boats are scheduled to arrive at Milwaukee in the near future.



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Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W. G. MacNAUGHTON, Secretary

DETERMINATION OF THE CHLORINE ABSORBED BY UNBLEACHED SULPHITE PULP*

By Ralph B. Roe of The Paul A. Sorg Paper Co., Middletown, Ohio

In the bleaching of sulphite pulp, some advance knowledge of the amount of bleach required is of considerable importance, both as regards the economy of the operation and the uniformity of the finished product. With sulfite mills bleaching their own pulp there may be a marked variation in the bleach required, and this variation is much more evident in the case of converting mills that bleach a large variety of pulps principally of foreign manufacture.

Several methods for estimating the required bleach have been proposed, and some of them are understood to be in regular operation as a matter of routine. It was not with the intention of developing a different method that the present work was initiated, but rather is it the outgrowth of some experimental work on the action of chlorine gas on pulp. The results and experience gained in this investigation indicated the possibility of utilizing the chlorination reaction as a means of estimating the bleach requirements of pulps. After some trouble a method was worked out which has been in routine use in this laboratory for several months and which differs radically from the methods already proposed.

Previous Work

Among the methods proposed, those of Arnot, Wrede, Klemm, and Sutermeister are fully described by Schwalbe and Sieber.[1] These methods depend upon the addition of an excess of hypochlorite with a back titration of the unconsumed bleach or the addition of graduated amounts to different samples, and the bleach allowed to be entirely consumed.

Quite similar in principle is the method of Sieber[2] for the determination of the chlorine number of pulps. Sieber emphasizes the necessity of using bleach liquor of constant alkalinity, and his method is very carefully worked out in all details. Recently, Tingle[3] has described a method which depends upon the action of bromine on the pulp in acid solution. An arbitrary and rather exacting technic must be followed and the results are expressed as the bromine figure of the pulp. Andrews and Bray[4] have made a critical study of Tingle's method, and offer some slight modifications in the procedure.

A different reagent is employed by Johnsen and Parsons,[5] in the form of potassium permanganate. Under carefully controlled conditions of concentration, temperature, and time, the amount of permanganate consumed is determined and expressed as the permanganate number. The action of chlorine on ligneous fiber has been studied by a number of investigators, among whom may be mentioned Heuser and Sieber.[6] Under the assumption that the chlorine absorbed by ligneous fiber is a measure of the lignin, Waentig and Kerenyi[7] have described a method which involves the measurement of the increase in weight of the fiber when subjected to the action of chlorine gas.

Program for TAPPI Fall Meeting

The following is the program for the fall meeting of the Technical Association of the Pulp and Paper Industry at the Hotel Statler, Buffalo, N. Y., October 14 and 15:

Tuesday, October 14

9:30 A.M.	Business Session—H. S. Taylor, Presiding Reports of Progress by Chairmen of Committees
10:30 A.M.	Vocational Education and Training in the Industry Reports and Discussion
2:00 P.M.	Elimination of Waste in the Industry White Water Losses and Stream Pollution Heat and Power Losses Uncovered piping Building radiation Exhaust steam and hot water losses Heat in dry stack gases Steam load fluctuation
3:30 P.M.	The Paper Drying Code and Tests Drying Conditions and Paper Quality

Wednesday, October 15

9:00 A.M.	Paper Testing and Relative Humidity
10:30 A.M.	The Use of Glue for Coating Paper—Bureau of Standards Paper Sizing—Discussion of Manufacturing Problems Effect of drying temperature Sizing and stock temperature
2:00 P.M.	Chemical Pulp Seed Flax as a Papermaking Raw Material—Forest Products Laboratory Bleached Pulp from Decayed Wood
3:30 P.M.	Discussion of Manufacturing Problems
7:30 P.M.	Semi-Annual Dinner

*Presented before the Division of Cellulose Chemistry at the 67th meeting of the American Chemical Society, Washington, D. C., April 21 to 26, 1924. From J. E. I. C.

[1] "Die chemische Betriebskontrolle in der Zellstoff und Papier Industrie," 2nd ed., 1922, p. 210.

[2] *Ibid.*, 2nd ed., 1922, p. 272.

[3] *J. E. I. C.*, 14, 40 (1922).

[4] *Ibid.*, 15, 934 (1923).

[5] Paper Trade Journal, 76, 49 (1923).

[6] *Z. angew. Chem.*, 26, 801 (1913).

[7] Schwalbe and Sieber, *op. cit.*, 2nd ed., 1922, p. 107.

Preliminary

An experimental investigation of the action of chlorine on moist ligneous pulps showed the reaction to be so rapid and clean cut that it was thought desirable to attempt to utilize it as the basis of an analytical method for the estimation of the bleach requirement of sulphite pulp.

Attention was first directed to the absorption of the gas by the pulp in aqueous suspension, using a known volume of the chlorine which was bubbled through the pulp and water, the excess being removed by a current of gas, absorbed in an alkaline medium, and titrated. The method employed was somewhat similar to that described by Heuser and Niethammer.[8] Considerable difficulty was experienced in obtaining satisfactory duplicate determinations and, moreover, the method was too involved for any possible practical application.

Since the relatively large volume of water necessary to hold the pulp in suspension seemed a disadvantage, the pulp moistened with approximately its own weight of water was subjected to the action of chlorine gas, the excess being absorbed and titrated as before. The action was apparently more rapid and the manipulation somewhat more simple, but the possible error in titrating the relatively large excess of chlorine made the method appear of doubtful value.

Inasmuch as all previous work had emphazised the inherent possibilities of utilizing the chlorination reaction, an attempt was made to expose the moist pulp to the gas and measure volumetrically the amount absorbed. After some slight difficulty a satisfactory procedure was worked out.

Preparation of Sample

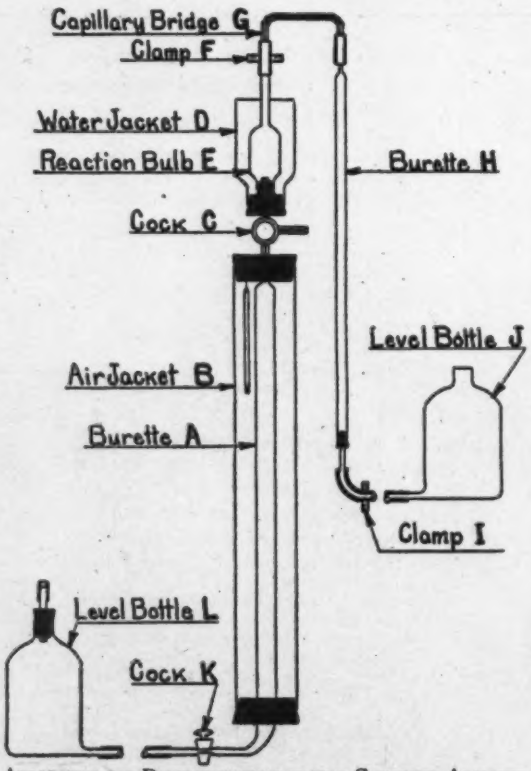
To obtain an average sample of pulp in a pulp mill presents no difficulty. With foreign pulps in air-dry sheet form it is necessary to secure samples from sufficient packages to represent the shipment fairly. These samples, or equivalent portions of them, can then be defibered and mixed in some form of stirring device and the pulp made into hand sheets. As the formation and appearance of these sheets make no difference, they may be made very thin, preferably on some form of suction mold, in which condition they may be dried very quickly.

In this laboratory it is customary to test pulps for comparative strength, and the hand sheets remaining from this test serve very well for the determination about to be described.

The advantage is using hand sheets is that a small sample truly representative of a large amount of pulp may be used, quickly oven-dried, and weighed directly. It is necessary that very hard pulps be defibered before use, particularly those that have been heavily pressed. If necessary, relatively soft pulps in dry sheet form may be weighed directly, moistened, and then thoroughly softened and opened up by working between the fingers.

Apparatus

The arrangement of the apparatus used is shown in the accompanying sketch. The burette, *A*, is a modified Morehead gas burette, calibrated in from 0 to 100 cc. and provided with a 3-way cock, *C*, at the top and an ordinary cock, *K*, at the bottom. The burette is surrounded by a jacket, *B*, which is used as an air jacket only. The top capillary of the burette is provided with a No. 8 rubber stopper and a smaller one immediately above it. The water jacket, *D*, which consists of a wide-mouth, 8-ounce bottle with the bottom cut of, fits over the large stopper. The reaction bulb, *E*, fits the smaller stopper. The reaction bulb must be of special size and form (a Hortvet tube serves the purpose very well if the graduated or constricted portion is cut off about 1 cm. from the bottom). The reaction bulb is connected by rubber tubing with a capillary bridge, *G*. A screw clamp is interposed between the end of the reaction bulb and the capillary bridge. The other end of the bridge is connected by rubber with the bottom end of an inverted Mohr burette, *H*. The other or larger end of the Mohr burette is connected by means of a cork, glass, and rubber tubing with the level bottle, *J*. A screw clamp, *I*, operates on the rubber tubing leading to the level bottle. The lower end of burette *A* is connected by rubber with the level bottle, *L*. The latter is provided with a stopper and tubing leading to a hood or other source of positive ventilation.



APPARATUS FOR DETERMINATION OF THE CHLORINE ABSORBED BY UNBLEACHED SULPHITE PULP

Confining Liquid

The principal difficulty in working with chlorine volumetrically lies in the use of a suitable confining liquid. Mercury, of course, is immediately excluded, and water is ill adapted because of the unstable condition of the gas and saturated solution with respect to each other. A filtered solution of calcium chloride made up to about 32° Bé. proved quite satisfactory. Such a solution can be saturated with gas quickly and, when once saturated, the excess gas in the vapor phase remains in fairly stable equilibrium with that held in solution, over comparatively long periods of time. As the level bottle, *L*, always contains chlorine gas over the liquid, the upper end of this bottle is connected to the hood so as to permit the level bottle to be raised or lowered. The burette, *H*, with its attached level bottle is filled with water. The rubber connections and tubing will last for several months, and a mixture of beeswax and vaseline serves well as a stopcock lubricant.

Ventilation

Another objection to the use of chlorine is based on the difficulty of working with it in an ordinary poorly ventilated laboratory. This particular laboratory is provided with an induced draft through the hood, and the fan can be turned off or on at will. Under ordinary conditions the fan is operated only for about 2 minutes during a determination, and under these conditions the laboratory door is invariably open, although it communicates directly on a much-used hall in an office building. By some very slight precautions, which would not seriously interfere with the manipulation, the apparatus could be operated without any artificial ventilation, although a fan is to be preferred.

Procedure

In starting a determination, the

[8] *Papier-Fabr.*, 21, 22A (1923).

jacket, *D*, is removed and the reaction bulb, *E*, allowed to swing down by means of the flexible connections to the bridge, *G*. Stopcock *C* is first opened so as to communicate with the side capillary, which is attached to a cylinder of chlorine by connections not shown in the sketch. Cock *K* is opened and the gas turned on at the cylinder valve. The gas is allowed to force the liquid in the burette down and back into the level bottle and bubble through the latter slowly for about 1 minute. Cock *C* is then turned to communicate both with the side arm and the air and the gas in the burette is forced out by raising the bottle. It is not customary to close the gas supply while so doing. This operation is repeated once, and on the third filling of burette *A* the gas supply is shut off at the cylinder when the level falls to between 90 and 100 cc. A short piece of bent, drawn-out tubing is inserted into that portion of the capillary above cock *C* and the chlorine blown out. The gas in the burette, A, is then leveled up, but not accurately.

Exactly 2 grams of oven-dried pulp in the form of thin sheets are weighed out. Apparently it makes no difference whether these sheets are extremely thin or reasonably heavy. Ordinarily, the sheets will run around 0.008 inch thick. The portion weighed off is then immersed in water for a few seconds until saturated, removed, squeezed between blotters by hand, and again placed on the balance. Sufficient water is added to the moist sheets while on the balance pan to bring the weight up to 4.5 grams. Usually only a few drops of water are required. The sample is then placed in the reaction bulb, crumpling each piece slightly. When the whole sample is in the tube, a short piece of flexible wire with a small hook on the end is inserted and the sample pulled down so that the upper third of the enlarged space in the reaction bulb is empty. The water jacket, *D*, is next fitted to its stopper and the reaction bulb also firmly fitted to the smaller stopper. The water jacket is filled with water previously brought to 25° C. Stopcock *C* is then opened so as to communicate with the burette and reaction bulb. The gas is carefully leveled and the volume read. The level bottle, *L*, is raised slightly and placed on a stand so as to put the gas under slight pressure. Screw clamp *I* is opened and exactly on the even minute clamp *F* is slowly opened. The water level in burette *H*, which previously had been brought to some definite place in the capillary bridge, is allowed to fall slowly, until about 10 cc. of air have been drawn into burette *H*, when clamp *F* is closed. The water in burette *H* is leveled with bottle *J*, and clamp *I* tightened. The level in burette *A* will gradually rise, and during the first five minutes the liquid is leveled up frequently, closing cock *K* during the intervals between leveling. The object is, of course, to maintain the gas under approximate atmospheric pressure. The reaction proceeds very rapidly at first, but after 5 minutes the rate of increase is quite slow. Exactly 14 minutes from the time clamp *I* was opened the water in burette *H* is forced up, clamp *I*, cock *K*, and clamp *F* being opened in the order named. When the water reaches the initial point in the bridge, clamps *F* and *I* are closed and the gas volume is immediately leveled and read.

By following the procedure as outlined, the intervals between the time when gas is first admitted to the reaction bulb and the time of the final reading will be very close to 15 minutes. The volume of chlorine absorbed when corrected for temperature and barometer reading is converted into grams and expressed as the percentage on the pulp taken. The preparation of a table giving the weight of chlorine for different barometer and temperature conditions simplifies the calculation.

An experimentally determined "blank" amounting to 0.40 per cent is subtracted, and the result, which refers to the chlorine expressed in grams absorbed by 100 grams oven-dry pulp, is designated as the chlorine number of the pulp.

Following each determination the water in jacket *D* is siphoned off and the jacket and reaction bulb each disconnected from its respective stopper. The chlorinated pulp is removed from the bulb, and the latter wiped dry on the inside with a cloth, a piece of glass tubing is run into the bulb and any residual chlorine blown out. The time consumed for a single determination is about 20 minutes. For several successive determinations, the actual time for each is about 25 minutes, since the jacket and reaction bulb must be emptied before each successive determination.

Results

A very wide range of domestic and foreign, direct and indirect cooked, unbleached sulphite pulps have been examined according to the foregoing procedure. The following typical data illustrate the widely varying amounts of chlorine absorbed:

	Chlorine Number			
	Duplicate Determinations			
Sample	(1)	(2)	Average	Variation Per cent
1	2.21	2.23	2.22	0.9
2	3.66	3.66	3.66	0
3	3.75	3.82	3.79	1.8
4	4.27	4.31	4.29	0.9
5	4.98	4.90	4.94	1.6
6	8.97	9.00	8.99	0.3
7	10.32	10.28	10.30	0.4

In fifty determinations run in duplicate and selected at random from routine results, the average percentage error between the duplicates is 0.8 per cent with a maximum of 1.8 per cent and a minimum of 0 per cent.

Therefore, as an analytical method for comparative study of a wide range of unbleached pulp, the accuracy seems to be quite satisfactory.

Arbitrary Factors in the Method

Since the suggested method calls for a rather precise sequence of manipulations, it may be desirable to explain why various details in the apparatus and procedure have been adopted.

Some question might be raised as to the possibility of drawing chlorine over into the water-filled burette along with the air. This possibility is prevented partly by the shape of the reaction bulb, and partly by reason of the high density of chlorine gas referred to air. Some air must be drawn from the reaction bulb to start the reaction. The exact quantity is immaterial, but a volume of about 10 cc. has been adopted as standard.

It is obvious that the results as expressed, while comparative, contain constants that should be deducted if more absolute accuracy is desired. The larger and, in fact, only important of these constants involves the amount of chlorine absorbed by the moisture in the pulp. A close approximation to this, as well as a check on the equilibrium between the gas and confining liquid, can be made by operating the method on some pure, bleached cotton cellulose— e. g., filter paper. Different grades of filter paper have been so treated and the results give an average of 0.40 gram chlorine per 100 grams paper. This figure is considerably lower, however, than the solubility of chlorine in the amount of water used, which probably is to be expected under the conditions.

The time has been arbitrarily fixed at 15 minutes, partly for the reason that the results are chiefly of comparative value and partly because experimental evidence leads to the belief that the chlorination reaction is complete in 15 minutes. A longer period of chlorination shows a progressive increase, as indicated:

Time Minutes	Chlorine Number
15	8.46
20	8.61
25	8.72
30	8.81

It seems probable, however, that the progressive increase is due to some secondary reaction or some slight oxidation effect. This view is confirmed, if the chlorinated pulp is thoroughly washed with cold water, then with dilute alkali, and finally with water, and rechlorinated as in the original procedure. A number of experiments on pulp having widely varying chlorine numbers show that the increase from the second chlorination amounts to 0.50 per

cent. This is slightly higher than the blank given by filter paper, and the difference probably represents oxidation, as the rechlorinated pulp improves in color.

The foregoing evidence is not entirely conclusive, as there is the probability of washing out other substances together with the lignin chloride. However, the alkaline treatment was cold and dilute (1 per cent NaOH) and of less than 2 minutes' duration, with only sufficient washing to remove traces of alkali, so it seems probable that the error in this direction is comparatively small. At any rate, it is assumed that the chlorination is complete within 15 minutes, even on a very hard pulp, and when the sample is quite compactly placed in the reaction bulb. This conclusion is at some variance with the results of Ritter and Fleck,[9] who found the reaction between sawdust and chlorine would not go to completion within a reasonable time unless the sample was washed with sodium sulphite between chlorinations. These investigators suggest that the lignin chloride prevents penetration of the chlorine. With pulp no such difficulty occurs, because of the lower lignin content and more especially because of the different physical form which permits complete penetration.

The use of a water jacket around the reaction bulb is desirable, because the reaction is markedly exothermic, and without the water jacket the bulb becomes distinctly warm. Irregular action of the chlorine and hydrochloric acid formed as a by-product is better controlled if a water jacket is used.

Translation of Results

Theoretically, it is to be expected that the so-called chlorine number as determined by this method should yield valuable data as to the amount of bleach required for any given pulp. It is quite true that chlorination followed by alkaline treatment will not in itself yield a white pulp. A comparatively small amount of nonligneous material remains to color the pulp very distinctly. These residues may be completely and quickly oxidized through the application of a small amount of hypochlorite. For example, an exceedingly hard pulp, after chlorination in the method described followed by an alkaline wash, will yield a fine, white fiber by the application of the equivalent of about 3 per cent dry bleach.

The results as determined require the use of an arbitrary factor or constant to convert the chlorine number into percentage of dry bleaching powder or available chlorine. Under conditions prevailing in this mill, a factor of 5 seems to yield a satisfactory white color with the minimum amount of unexpended bleach. With a chlorine number of 4.1 for example, the equivalent of 20.5 per cent dry 33 per cent bleaching powder would be required.

It is quite possible that the factor would have to be altered slightly for very widely differing pulps. In bleaching a hard pulp there is evidently much more gas involved than with a soft pulp bleached under similar conditions. If this gas is assumed to be carbon dioxide, as pointed out by Schwalbe and Wenzl,[10] it would quite likely have an effect on the reaction characteristics. Furthermore, in bleaching hard pulps the bleach is necessarily not all expended in useful work. The yellow, water-soluble extractives or decomposition products will in themselves consume considerable bleach. These and other considerations make it appear doubtful whether two widely different pulps may be experimentally or commercially bleached, even under identical conditions, with any assurance that a proportionality factor may be rigidly applied to them.

Conclusions

The foregoing method for the determination of the chlorine absorbed by unbleached sulphite pulps suggests a rapid means for the evaluation of the comparative bleach requirement of pulps. The results obtained are strictly comparative in themselves and can be translated into bleach equivalent terms by means of a factor which depends on the conditions under which the bleach liquor is utilized. Manipulative technic is no more difficult than with an Orsat apparatus, and can be easily mastered by an operator with little or no chemical training. No attempt has been made to correlate the results with those obtained by other methods, neither has the method been applied to other than sulphite pulps. The application of gas volumetric methods might be used to advantage in the critical study of ligneous fiber.

Acknowledgment

The writer is indebted to Claude A. Sorg for advice and to Max Eisenmenger for accumulating the data incidental to the development of the method.

[9] *J. E. I. C.*, 16, 147 (1924).
[10] *Papier-Fabr.*, 21, 268 (1923).

An Armstrong Steam Trap for Extreme Pressure

The Armstrong Machine Works has just put out a new steam trap designed for extreme pressure and temperature. In this latest addition to the Armstrong line the body and cap are of the highest grade of cast steel, having the following characteristics: tensile strength approximately 70,000 lb.; elongation 25 per cent; carbon 0.25 to 0.30; manganese 0.60; silicon 0.25 to 0.30. All strains are removed from the castings by annealing.

The steel trap embodies the same patented basic operating principle that has been so well established in the standard Armstrong trap. As in the standard trap, the discharge is at the top so that oil and sediment are forced out whenever the trap discharges. An air port in the closed end of the inverted submerged bucket permits any air that may enter the trap to rise to the top and be released when the trap discharges.

Realizing the fierce service conditions imposed by high pressure and superheat, the valve parts have been made particularly rugged, and throughout the trap is designed to stand up under the most severe conditions. The valve parts are non-corrosive chrome steel, machined from bar stock, then heat treated. The valves are furnished with orifices suitable for pressure up to 500 and 600 lb., or higher in special cases. The cap is bolted to the body with eight to ten large bolts, depending on the size of the trap.

After the trap is completed, it is hydraulically tested to pressures up to 3,000 lb., to insure tightness of castings, joints, and valves. The steel body trap is also made for pulsating pressure service.

The Armstrong Extreme Pressure Trap is described in a new bulletin issued by the manufacturer, Armstrong Machine Works, Three Rivers, Mich.

Russian Paper Industry Adopts Metric System

1. By decree of the Soviet of Peoples' Commissars all government, co-operative and private manufacturing and selling enterprises of the paper and printing industries are obliged to adopt the metric system in production and wholesale distribution commencing October 1, 1924.

Note. This decree does not apply to the use of established units of measurement for printing type and accessories.

2. All establishments affected by the decree must obtain the necessary units of weight, length and volume by October 1, 1924.

Note. Failure to obtain the metric units by October 1, 1924, but not later than January 1, 1925, will not be punishable, provided all entries in books and documents are in metric units.

3. All wholesale paper houses must have posted not later than October 1, 1924, tables giving the relation between Russian and metric units, prepared by the Bureau of Weights and Measures.

4. For all cut papers a ream shall be 1,000 sheets, and packages shall contain 1,000 sheets or an even fraction thereof (i.e., 500, 250, 100 sheets, etc.). Such packages must be marked "metric measurement." Writing papers can be made up into packages of 50 and of 5 sheets each.

5. All paper in storage by October 1, 1924, may be sold in the old packages not later than October 1, 1926.

By the President of the Council for Public Economy.

PAPER DRYING

The Importance of Air Control

C. H. Leicester, Chief Engineer Pacific Mills, Ltd., Ocean Falls, B. C.

A study of the tabulation of paper drying tests[1] in *Technical Association Papers*, Series VIII (1924), will reveal some rather remarkable facts.

It is possible to ascertain the total heat above that supplied by the air surrounding the machine, which is passing out of the exhaust ventilators.

If T = Temperature of exhaust
t = Temperature of surrounding air
t' = Temperature of stock
M = Moisture content per lb. of exhaust air
m = Moisture content per lb. of surrounding air
L = Lb. of dry air in exhaust per unit of time
l = Lb. of water evaporated
Specific heat of air, 0.238
Specific heat of vapor, 0.48

Then this amount of heat will be represented by the equation: $H = l \times (212 - t') + 966 - 0.48, (212 - T) + ML \times 0.48 (T - t) + 0.238L (T - t)$.

The value of this equation for the five news machines given in the table is as follows:

	Heat in Exhaust B. t. u.	*Heat Absorbed by Driers* B. t. u.
A	10,695,170	10,754,000
B	14,843,968	24,018,650
C	10,955,617	10,275,659
D	21,072,378	19,640,000
E	2,014,344	2,572,829

Comparing these figures with the heat absorption of the driers given in the other column, we are faced with the somewhat remarkable and in some cases, as it appears to me, impossible condition.

C and D both show more heat going up the exhaust that has been supplied.

A shows a slight loss of 58,830 B. t. u.

B shows the enormous loss of 9,174,682 B. t. u. A small portion of this heat has doubtless been used to heat the surrounding air and on that account outside temperatures should always be given so that the full credit of such radiated heat can be given to the machine.

E shows a loss of 558,485 B. t. u. which is a very heavy percentage. It is evident, since all water evaporated is shown to be present in the exhaust, that excepting the small number of heat units which have been absorbed by the surrounding air entering the machines, none of these heat units can have come in contact with the sheet and have been, therefore, a dead loss. What are the causes and how can they be prevented?

I am of the opinion these questions can be answered in two words, Air Control.

The work of the driers is performed in two distinct operations.

1. The heating of the water in the sheet while in direct contact with the rolls.

2. The evaporation of the water while the heated sheet is exposed to the air.

It may be described as a continual alternating process, the number equal to the number of driers, the alternations being heating and cooling.

It is evident that the more rapid the evaporation is during the exposed period, the more rapid will be the cooling process since all the latent heat of evaporation will be absorbed from the sheet. The greater the lowering of temperature the more rapid will be absorption of heat from the rolls, as the cooled sheet again passes to the next roll, since heat transfer is proportional to temperature difference.

The driers may be likened to a series of low pressure boilers and in one respect they are exactly similar in that their efficiency depends on air control.

It is evident that while steam is the agent for the transmission of heat, the air is the agent of conveyance of the vapor from the sheet.

The limit of the amount of evaporation is the saturation point of the air immediately in contact with the sheet; that is to say, no evaporation can occur from the exposed sheet at a temperature less than

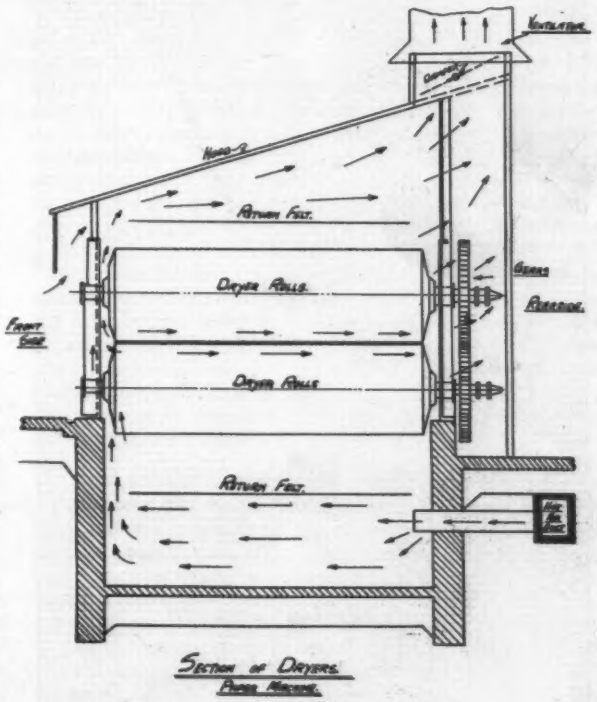


Fig. 1

that of the boiling point of equivalent barometric pressure, unless unsaturated air is in contact with the sheet.

There must therefore be a continual circulation of air across the sheet in order that evaporation may be continuous. This is most easily accomplished by what is known as cross ventilation.

The attached sketch, Fig. 1, shows a proposed method of adapting the circulation in conjunction with heated fresh air supplied by a fan, the air being heated with waste gases from the boiler room.

There is a physical law that by raising the temperature of air its vapor carrying capacity is increased enormously. Air at 120 degrees F. will carry nine times as much moisture as it will at 58 degrees F. (See curve, Fig. 2.)

It will be evident, therefore, that by raising the temperature of the surrounding air we will increase the evaporation of the sheet.

There will be a further gain. It is not possible to prevent some of the circulating air from coming in contact with the exposed driers and so conveying some heat units to the exhaust which will not come in contact with the sheet, and so will be lost. The raising of air

[1] Paper Trade Journal, Aug. 28, 1924.

temperature will lower these losses in two ways: first, the temperature difference is lower, and second, much less air is required.

The problem becomes a question of the necessary amount of air required and the means to control that amount so that there should be no excess.

It must be borne in mind that the specific heat of vapor is twice that of air, so that in the lowering of vapor temperature there will be a double quantity of air raised the same number of degrees as the vapor has been lowered.

Reference to Fig. 1 will show the air entering at the rear of the closed pit, sweeping across the lower side of the return felt, picking up some of the moisture from it. The temperature will be raised at this point, thence, rising across the front face of the machine where

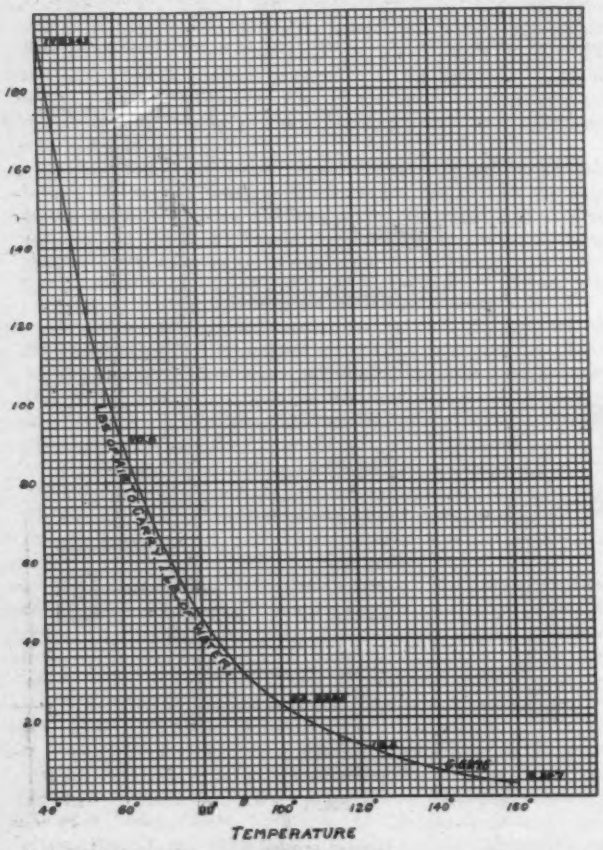


FIG. 2

by induction of stock draft it is drawn through the machine, coming in contact with all exposed parts of the sheet.

If we allow a moisture content of outside air of 0.01 pounds per pound of air it will require 10.7 pounds at a final temperature of 150 degrees F. per pound of paper.

Roughly it may be stated that air supplied as shown at 120 degrees F. will be in excess at 12 pounds per pound of paper.

Comparing this with figures shown in the tabulation of tests:

	Air Per Pound of Paper Lb.
A	33
B	58
C	73
D	23
E	70

To heat this quantity of air from an outside temperature of 55 degrees to 120 degrees F. would require 185.24 B. t. u. This is far less heat than has been absorbed by the air in its passage to the machines in any of the tests given.

By the use of air preheaters, using the waste gases from the boiler room, this heated air would be supplied at a cost of depreciation and interest on a small investment, and the efficiency of the driers would be very materially increased. The reasons of increased efficiency would be:

1. The air currents across the felts on their return passage pick up moisture from them, thus renewing absorbent qualities and adding to their life.

2. The passage of air across the front of the machine picks up many of the radiated heat units which would otherwise be lost.

3. The high temperature of the surrounding air at the back of the machine cuts down radiation losses.

4. There will be no moisture passing into the machine room and all heat given up by the lowering of vapor temperature will be used in raised air temperature and thus increase the carrying capacity of the air.

The damper in the exhaust stock should be used intelligently, governed by the known condition of exhaust, which could be read from an installation of dry and wet bulb thermometers.

It would be possible to operate this under an automatic thermostatic control.

A New Book on Starches

From the Barr-Erhardt Press, Inc., 205 West 10th street, New York City, comes a new book by Walter A. Nivling, consulting chemist, entitled "Starches" and dealing with their fluidity and viscosity in relation to sizing values for textiles. The book is prepared especially for the textile mill users of starch as an aid to a better understanding of methods of testing fluidity and also of the behavior of starch solutions used in sizing of textiles.

In his preface, the author says: "Not long since, at a convention of textile men, when the subject of viscosity and fluidity of starches was brought up, the chairman found that while many of the men present had been buying starch according to fluidity and viscosity test, they really did not know what these tests stood for."

This apparently prompted the author to write his book which should lead to a better understanding of the subject. The little work, which sells for $1, is well illustrated.

Box Board Simplification Program

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., October 8, 1924.—W. A. Gately who is handling the box board simplification program for the Simplified Practice Division of the Department of Commerce, is taking no steps in connection with the program until after the four allied industries appoint their simplification committees.

It is believed here that these committees will have been appointed by the end of this month, following which it is expected that a preliminary conference will be called. While details of course have not yet been worked out it is thought that this conference will be held in New York City.

Mr. Gately also has in hand the matter of simplification in the binderboard industry. This latter program, however, has not progressed to any considerable extent.

Boiler Questions Answered

In an attractively illustrated booklet Edge Moor Iron Company, Edge Moor, Del., presents in concise form a synopsis of the features of the Edge Moor boiler in which prospective users will be interested.

Mention is made of Catalog 63 which contains very complete information as to structural details, special applications, and test records of this boiler, which will be sent on request.

RELATIVE HUMIDITY AND PAPER TESTING

By E. O. Reed, Chief of Tests, Government Printing Office

During the last few years considerable interest has been developed in regard to the effect of relative humidity upon the physical tests of paper and the adoption of a standard atmospheric condition for testing paper. The importance of this subject has been further increased by the addition of the folding endurance test to specifications for fine papers.

In an article published by the author entitled "Discussion of Standard Atmospheric Conditions for Paper Testing," in the Paper Trade Journal, Feb. 28, 1924, it was recommended that 50 per cent relative humidity be adopted. An article entitled "Relative Humidity and Paper Testing" was printed in the Paper Trade Journal of Aug. 21, 1924, by F. A. Curtis, Chairman of the Paper Testing Committee of the Technical Association of the Pulp & Paper Industry, in which testing conditions were discussed and it was recommended that 65 per cent relative humidity be used until further data and information are available. It is desired in this article to present additional data in favor of the adoption of a testing condition of 50 per cent relative humidity, which is more in harmony with actual indoor atmospheric conditions and gives a direct comparison between the tests and actual serviceability of paper.

Mr. Curtis states in his article that "almost any relative humidity within reasonable limits would be suitable to the manufacturer," and we agree with him that, "since there are many types of paper it is quite obvious that the conditions under which most paper is used should be adopted as standard." Full consideration was given to these facts by the Government Printing Office in adopting 50 per cent relative humidity and 70° to 75° F. temperature, as set forth in my previous article.

A careful study of indoor relative humidity conditions covering several years, showed that the average indoor relative humidity is approximately 40 to 45 per cent. This investigation was based on psychrometric readings taken in the Middle West, New England and District of Columbia. Further investigations are now under way by the Government Printing Office in co-operation with the United Typothetæ of America, in various parts of the country, which it is believed will sustain the average already ascertained.

The Purpose of Paper Testing

The purpose of paper testing and specifications is to secure an indication as to the quality, serviceability and probable durability of paper, in order to assure the consumer that he is obtaining the most suitable paper for the use to which it is to be put. There is no question but that the largest quantity of paper, especially book, news print and wrappings, and fine papers are used and handled indoors where average atmospheric conditions prevail. These conditions prevail in libraries, commercial offices, courthouses, stores, shipping departments, bookkeeping offices, post offices, and railway express and mail cars, where most paper is handled.

The atmospheric conditions under which the printer or converter handles paper are not necessarily the conditions under which it should be tested. There is no doubt but that increasing the humidity of the air in plants handling paper gives direct advantages such as better printing, overcoming of curl, and to a certain extent elimination of static electricity. However, as far as can be ascertained, the commercial plants which have been equipped with humidity control operate at approximately 45 or 50 per cent. The printer or lithographer desires uniform conditions in order to reduce to a minimum expansion and contraction, or other atmospheric effects on paper.

Paper quality is of interest to the printer or converter chiefly in order to furnish his customer with the most suitable paper for the purpose for which it is to be used. As far as the printer or converter is concerned any quality of paper which will print satisfactorily and will stand the necessary handling in his plant would be satisfactory. News print or an antique book paper could be printed for stationery, office and factory forms, or legal documents; in fact the printer might prefer a coated paper for all types of printing since such paper gives a better result from the printer's point of view.

Lack Humidity Controlled Rooms

Most paper mills, jobbers, converters and large consumers of paper are equipped with different kinds of testing apparatus for the testing of paper, but without humidity controlled rooms for making tests. All kinds of paper from boards, news print and book papers to the highest grades of bond and ledger are submitted to tests by these concerns under prevailing indoor conditions.

If an abnormally high relative humidity of 65 per cent were universally adopted commercial concerns would be required to install humidity testing rooms. In the sectional meeting on paper testing of the TAPPI for 1923, a mill chemist made the following statement: "I see by these charts (referring to tabulation of results showing the effect of relative humidity on various physical tests of paper) that the increase in strength is a whole lot quicker after the humidity passes 45 to 50 per cent. There are very few laboratories, as far as I can find, that are able to maintain 65 per cent but they are able to get 45 and 50 per cent very easily, without much extra equipment."

If a humidity in harmony with average indoor conditions is adopted, the testing of paper such as news print, book paper, boards and wrapping, for which kinds of paper bursting strength and tensile strength tests are sufficient in most instances, tests made under average indoor conditions would agree favorably with those made under uniformly maintained conditions of 50 per cent relative humidity, except on days in the summer when high relative humidity and temperature conditions may occur.

Conditions During October to May

During the months of October to May, when low indoor humidity conditions prevail, to increase the humidity indoors to 65 per cent requires the addition of such a large amount of moisture that there is condensation on the windows and other parts of the room. In fact, the condition is so abnormal that it is not comfortable to work under, and steel and iron rust badly when exposed to such an atmosphere. This statement is made as the result of ten years' experience in a testing room maintained at this condition. The rusting of scientific testing apparatus should be guarded against.

It has been found that bursting strength and tensile strength tests are not sufficient to indicate the quality of fine papers. Such tests as the folding, brittleness, and tearing tests, all of which are decidedly affected by atmospheric changes are therefore necessary, and these tests must be made under uniformly controlled conditions.

Fiber Strength Sought

In the article by Mr. Curtis it is stated that "the tests on the folding machine at 50 per cent more truly indicate the folding quality of the fiber, especially in the case of tub-sized papers." The fiber strength of paper is what indicates serviceability and probable durability, and is the quality it is desired to measure. The comparative test values of different papers are not the same when made at 50 per cent relative humidity as when made at 65 per cent relative humidity. If papers are tested at 50 per cent relative humidity and found satisfactory, they will certainly be satisfactory at the higher relative humidity of 65 per cent. However, the reverse is not true. Papers which may be satisfactory at a higher humidity may be brittle and unserviceable at lower humidity conditions. Therefore, since the condition of 50 per cent relative humidity more directly

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indicates the folding resistance of the fiber, it is the condition under which paper should be tested.

It has been claimed that to change the relative humidity would upset the existing research in paper testing or the chemical control of the paper mills. It seems impossible that such a change could be anything but beneficial to the paper manufacturers for the reason that most paper mills and consumers make all their tests under average indoor humidity conditions without any effort to control the relative humidity. A relative humidity of 50 per cent is certainly more in harmony with these conditions that 65 per cent relative humidity.

A survey indicates that there are possibly seven humidity controlled paper testing rooms in the country, and four of these are in the government service, two are in paper mills and one in a commercial testing laboratory.

It is stated in the article on "The Effect of Atmospheric Humidity on the Physical Testing of Paper," by the Bureau of Standards, published in the PAPER TRADE JOURNAL of April 13, 1923, that "most paper is used indoors where the average relative humidity is below 65 per cent. Testing at a lower humidity would have the advantage of more nearly approximating the service conditions of paper, but this advantage would be outweighed by the resulting disadvantages."

Sound and Logical Argument

The argument presented for using 65 per cent relative humidity, that it is easier to maintain, cannot be considered sound and logical. It has been found just as easy and no more expensive to maintain a 50 per cent relative humidity at 70° F. temperature as 65 per cent relative humidity at 70° F. The statement that most laboratories maintain 65 per cent will not be borne out, since there are few testing laboratories or paper mills which have made any attempt to maintain uniform testing conditions.

In conclusion I wish again to urge the adoption of 50 per cent relative humidity and a temperature of 70° to 75° F. for paper testing since this condition is in harmony with average indoor conditions, the results obtained at this condition are indicative of actual serviceability, and this condition is easy to maintain. Paper tested at this humidity will be found satisfactory at any higher condition to which it may be subjected, whereas paper tested at a high relative humidity will not necessarily be satisfactory at lower humidity conditions. This condition will be of benefit to the manufacturer and converter as well as the consumer.

"How to Know the Hardwoods"

Joseph S. Illick, of the Pennsylvania Department of Forestry, already has a long list of useful tree publications to his credit, but the biggest and best thing he has ever done is "Tree Habits—How to Know the Hardwoods."

Within the three hundred and thirty attractive pages of this book, one finds descriptions of one hundred American hardwoods and perhaps fifty more introduce species, told in a way that the novice can scarcely fail to understand, and illustrated in most satisfactory fashion by drawings and plates of more than usual merit.

Each family of trees is given a separate chapter, with the addition of a tabular arrangement of distinctive characteristics of leaf, fruit, bud, twig and bark which is particularly helpful to the novice who is trying to learn tree species, and a means for quickly refreshing the memory of the forester, whose other duties has caused his knowledge of tree identification to grow rusty.

The language of the book is so admirably simple that there is little need for the final two pages of definitions of technical terms. In fact, it takes considerable scanning of the text to find any such terms at all, yet the definitions are both adequate and accurate.

Illick's book is printed by Lippincott, and the American Nature Association has made us its debtor through being the publisher.—R. S. KELLOGG.

The Dirt Problem in Chemical Pulp

A member writes:

"For several years we have been considering installing rifflers in our pulp mill to help clean up our pulp. It seems to be generally conceded that rifflers are a great help but occasionally we run into someone who doubts their value.

"I would like to get some information as to the value of a riffler for unbleached and bleached stock; also some details of the construction and operation such as the area required per ton of pulp, the lining to use, the density of stock advisable, the speed of flow and the depth of the stock in the riffler."

The dirt in chemical pulp, whether unbleached or bleached, has always been a problem, and from the nature of the raw material it will always be present. Undoubtedly much can be done to combat it by attention to the preparation of the wood before it reaches the digester. To clean the wood of all bark, to bore out the knots and hand pick the chips may be considered unwarranted labor expense but if this were still done there would be little for a riffler system to do.

The deep rifflers with cross boards were part of the chemical pulp mill equipment years ago but have long since been very largely discarded. They either took the place of the knot screen or were an adjunct to it.

While some dirt in the form of broken knots, bark and sand was removed, they were a heavy expense on account of the quantity of good stock that settled with the dirt.

In addition, through faulty design or control considerable dirt was carried over into the finished stock.

In recent years some of the mills, after struggling with dirt and doing all they believed possible in the wood room, even rescreening the chips before putting them into the digester, have taken up rifflers again. With the adoption of the wet barking system and hand cleaning in addition it is unquestioned that much dirt is kept out of the pulp. For a further improvement the later design of rifflers is usually placed between the fine screens and the pulp thickeners.

For successful operation they must be accurately calculated in order to get the proper rate and distance of travel as well as depth and density of the stock, so that the fine dirt will settle but not the fiber. The floor as well as the inlet and outlet must be level so that the flow is uniform. Generally no dams are used except perhaps a few towards the inlet end, while the floor is covered with a long napped fabric to hold the dirt from being carried forward. Sufficient area must be provided so that they can be cleaned periodically without interfering with the mill operation. If not cared for they might be productive of more dirt through slime than is removed. The space they take and the cost of construction need to be considered, as well as the upkeep and labor cost of operation.

I shall be glad to have the experience of the members on this subject. The responses will be handled in the usual way.

SECRETARY, Technical Association of the Pulp & Paper Industry.

Pioneer Paper Co. to Open Oct. 10

[FROM OUR REGULAR CORRESPONDENT.]

LOS ANGELES, Cal., October 6, 1924.—Willis G. Hunt, president of the Pioneer Paper Company of Los Angeles, returned recently from New York after making an extensive survey of manufacturing conditions prevailing in eastern centers. Mr. Hunt returned to Los Angeles in time to attend the opening of the $2,000,000 plant of the Pioneer Paper Company which will take place October 10.

Mayor Cryer of Los Angeles and hundreds of members of the industrial field of Southern California, will attend the official opening. The administration building, erected at the cost of $100,000, and of Spanish Renaissance style of architecture, is held to be one of the most artistic industrial buildings of Southern California.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

CONTROLLING THE LABOR*

By F. L. Sweetser, General Manager, Dutchess Mfg. Co., Poughkeepsie, N. Y.

For the purpose of this article, labor is considered as including all compensation of any nature paid in connection with the manufacturing division of an industry. Selling and administrative labor will not be dealt with. Manufacturing labor is properly divided into two classifications, direct and indirect.

A definition of direct and indirect labor that would be applicable to all cost systems would be so general that very little information would be brought out that would be of interest, and we could not hope to add anything to the information contained in a number of excellent books on the subject of cost accounting which most of you probably have read. Therefore, we will describe our interpretation of "how it should be done" (that is, the control of labor) in an industry similar to our own, using the class (unit) cost plan, with the thought in mind that the points brought out, while not applicable without considerable modification to cost systems in effect in a great many plants, nevertheless furnish material for considerable thought.

What Direct Labor and Indirect Labor Includes

Under this class (unit) cost plan, *direct labor* should include the cost of all labor definitely applicable to either operations or processes in the manufacture of the finished product or its component parts. It should be borne in mind, however, that compensation paid to employees engaged in operations or processes direct in themselves is direct only so far as such compensation coincides with the amount of work performed, or the actual time engaged in such work. As an illustration, suppose employee A is paid a straight weekly salary, although engaged in performing a direct labor operation. Because of lack of production, due to any one of several reasons, this employee is actually engaged only part time. Such compensation as he receives for work not performed should be considered as indirect labor, and charged to a proper indirect labor account which will reflect such idle time.

Indirect Labor should include all other labor, comprising salaries, wages or other compensation paid to all employees whose efforts cannot definitely be allocated to a specific operation or process in the manufacture of a finished product or component part.

Employment Department Record

It is unnecessary to spend any time emphasizing the importance of proper records in connection with the control of labor. Therefore, we will proceed to a brief description of a comprehensive system of records, starting with the Employment Department, proceeding through the Payroll and Cost Department, and embracing the final disposition of the information gathered in the books of account, and various statistics prepared as a guide for general management.

As cost men, we all appreciate that one expense that offers an opportunity for reduction, and that should be of vital importance to all management, is the cost of labor turnover. This naturally brings us first to the Employment Department. We will assume that no one will disagree with the idea of delegating to an Employment Department the task of providing the personnel required by the manufacturing departments, and to this end suitable records will be maintained, such as sources of personnel, personnel supply, physical requirements for different jobs, class wages, etc.

The Employment Department upon receipt of a requisition for additional operatives from a manufacturing department, should be in a position to supply them either by transfer from the surplus in another manufacturing department, or by engaging new employees. It is obvious that if the Employment Department is to function properly, recorded information is necessary as to the requirements for the particular position that is open; and in the case of employees available for transfer, information as to their ability, physical condition, attitude, etc., possible earnings on new job, and previous earnings on old job. The same information should be secured and recorded in the case of new employees.

Such records should include a History card for each employee, showing name and address, age, sex, nationality, whether married or single, dependents if any, brief summary of results of physical examination at the time of employment, education or training, previous employment, starting rate of compensation and subsequent changes, position for which he was originally hired, transfers or promotions, and if employee leaves or was discharged, the reason therefor.

Another record is that of attendance and earnings, which might very well be used for preparing a statement of earnings submitted to the State and Federal Income Tax Departments. Such a record is of considerable value in controlling labor turnover. Provision should be made for showing the attendance and weekly earnings, particularly in the case of piece or bonus workers. It has been our experience that the information compiled for making the income tax returns has been a very handy record to have available, when combined with the attendance record, to convince "Mr. Wage Earner" that the reason he is not earning a comfortable income is not because of low piece rates, but rather his own industry; the remedy is a nearer approach to full time. Conversely, if the fault is with the management, it gives a lead for investigation, which might develop cases of improper selection not apparent when the employee's fitness was considered in connection with the job

*From National Association of Cost Accountants' Bulletin.

requirements, for example, an operator of nervous temperament employed on a highly repetitive operation. The monotony of the job in this case would cause the loss of an employee who might be otherwise desirable, and might well be employed in another department. Or again, an employee, through some physical handicap not readily observed, might be unable to earn a fair wage in a given operation and yet be of the desirable type, and should be transferred immediately.

For the purpose of properly maintaining these records, there should be provided proper Engagement Reports, Transfer Reports, Rate Change Reports and Discontinued Reports. In the case of the Engagement Reports, either the individual slips or a summary of them should be submitted to the head of the manufacturing department for approval which is a means to control the labor at the outset, as it is obvious that no more effective means of control can be operated than by watching the additions to the payroll as they occur.

For the same reason rate change slips should have the approval of the manufacturing department head.

With reference to transfers and discontinuances, except for special cases, a summary of these would be sufficient.

Payroll Department Records

We will now take up the Payroll Department embracing time keeping, compilation of earnings, and actual payment of employees. From the Employment Department, the Payroll Department receives a report of new employees hired, giving starting date, rate of pay, and job or operation to which the employee is assigned. A payroll number is immediately given to the new employee, which is also used as his in and out clock number. Payroll numbers are assigned in groups to various departments, separated as to day workers and piece workers.

All employees, whether piece or day workers, are required to record their time in and out of the plant on time recorders. For piece workers, although attendance does not affect their earnings, the information as to hours worked is necessary for a proper control of piece rates. As day workers' earnings are based entirely on attendance, the reason for having their time properly recorded is apparent.

The Payroll Department maintains a piece rate record showing rates in effect for each operation, which are corrected currently from copies of rate setting slips as new operations are rated. For the purpose of computing piece work earnings, coupons are used which provide a space for punching out the number of units produced, and on the same coupons the rate applying against the operation performed is shown. As the work is completed and passed by the inspectors, the number of units is punched and the rate checked. At the end of the day the coupons are turned into the department head and after approval, are sent to the Payroll Department where rates and extensions are checked and the earnings posted to the piece worker's earnings record.

Day work earnings are figured from the clock record cards after approval by the foreman. These constitute the day worker's earnings record and are turned in to the Payroll Department weekly; extensions are made and the earnings posted to the payroll.

No day workers are ever paid on a piece rate basis unless upon duly approved voucher, which would show the time engaged in such piece work operation; or vice versa, no piece workers are paid on day rate basis unless upon approval of a voucher by the foreman, showing the time engaged and the reason therefore.

The payroll sheets provide for the reporting of total earnings of all employees in the department and show employee number, name, rate, total hours, total earnings, adjustment, net earnings, deductions, amount paid. It might be well to mention that this record is merely to summarize the earnings of employees according to their departmental grouping.

The question might be raised as to why the departmental payroll could not be determined by simply adding the total hours and earnings of all employees in the department from their earnings records, or from tabulator reports. This can be done, but in doing so we eliminate the important feature of permanency of record. By posting to departmental earning sheets, we assure a permanent record of earnings of all employees in the department, and are not confronted with the always impending danger of having the information separated in the file and the record thus destroyed. Moreover, an inspection and comparison of the payroll can be more conveniently accomplished if the earnings of all employees are grouped in some logical sequence according to departmental classification.

As each payroll sheet is completed, the total earnings are footed and the amount is checked with the total of the individual earnings record for the same group, in order to insure accuracy in posting. The total payroll for the departments is then posted to a summary sheet, the grand total of all departments being the payroll for the plant, for which the payroll check is drawn.

As soon as the payroll is completed, the earnings records are turned over to the employees by the departmental foreman in order to advise the employees in advance what their wages for the week will be. Supplying information of this kind has its benefit in that it gives the employee an opportunity to check the earnings reported with his own record, and where differences occur, permits him to take up the matter for explanation, or adjustment if necessary. Employees sign the earnings record and retain it until paid off.

A word or two may be stated regarding the method of paying off help. Paymasters pay off departmentally, receiving the individual's earnings record in exchange for the envelope.

Distribution of Labor Expenditures

Having described the control of labor through the process of providing the personnel and paying for its services, we are now faced with the task of distributing the labor expenditures. It would be a job but half done if this distribution were not made in a manner that would supply the greatest help to the executives who direct the manufacturing effort. For accounting, a distribution of payroll to direct and indirect labor by classes of product might well be sufficient. If we attempted to use as general a distribution as this for executive control, however, it is apparent the information would be of little use.

The only value obtained from so general a distribution would be a comparison with previous performance, and unless we are interested in ancient history, we might well save the effort expended.

A subdivision of labor detailed enough to require no further analysis by the executive, and a means of measuring the performance by the same subdivision, is the basis upon which the distribution of labor should be built.

Direct labor should be subdivided by departments and by operations within the departments.

Indirect labor should be distributed to various sub-accounts, such as supervision, clerical, property, industrial relations, power, development, receiving, storing, shipping, and miscellaneous indirect, and still further subdivided by departments and operations.

The actual operation of making this distribution can be greatly simplified by arrangement of the payroll so that operations by classes are more or less grouped. After the payroll is completed, the original records from which the roll was made may be sorted into as detailed a subdivision as required, a tabulation made, and the total checked against the payroll.

Labor Reports

For the purpose of measuring performance, standard labor costs are set which are the result of a scientific study of each operation to determine the most efficient method and its cost for each class of production.

Having set standards and scheduled production, it is possible to determine the expenditures for labor. Against this predetermined

or labor budget can be applied the actual labor cost by operations, showing the variations by operations.

A set of reports should be prepared as follows:

1—Direct labor budget, which would show the total scheduled production by classes for the period, and the pre-determined or standard labor for each class of production.

2—Analysis standard and actual direct labor, which shows the actual labor cost for the same production, and the variation from standard.

3—Analysis standard and actual direct labor departmentally—departmental analysis supporting the above showing the same information, only in the detail that would be of interest to department heads.

4—Weekly departmental class wage report, compiled from the payroll, showing by departments, the number of employees, total hours worked, total earnings, average hours and average earnings, separated as to sex.

5—Weekly operation class wage report, compiled from the payroll, showing hours worked and total earnings by operations.

6—Indirect labor budget, which would show the scheduled production, estimated working days, and standard allowed for each subdivision thereof.

7—Analysis of standard and actual indirect labor, which would show the actual indirect labor for the period, and the variation by each subdivision thereof.

8—Departmental analysis of standard and actual indirect labor, which would show the standard and actual indirect labor for each department by classes of indirect labor, and the variation by each subdivision thereof.

9—Ratio piece work versus day work, which would show the total earnings by departments, the amount of piece work and the amount of day work earnings, with the percentage of each to the whole.

These reports would not be complete without a further analysis as to the cause of the variation shown. The finer the subdivision of labor, the more readily this analysis may be made and the cause determined.

In addition to the above, reports showing the ratio of different subdivisions of indirect labor to various controlling factors would be of considerable interest to the management, and would assist them in the control of overhead, for instance the following:

1—Ratio of property expense labor to plant values.

2—Ratio of industrial relations expense labor to turnover and number of employees.

3—Ratio of power labor to production.

4—Ratio of receiving and storing labor to materials handled.

5—Ratio of shipping labor to production or sales.

6—Ratio of miscellaneous indirect labor to standard direct labor.

Reports of this nature should be prepared in such form that a comparison by periods can be made readily. The leads developed by a study of these reports direct attention to the high spots in the labor cost that are in need of regulation. For example, excessive variations in actual as against standard labor cost in any department would warrant an intensive study of local conditions which were handicapping efficient performance, such as improper routing, etc.

Fluctuations in operations class wage report would tend to show instances of improper rate setting, or insufficient training of employees.

There might be inefficiencies reflected in several of these reports, the reason therefor being quite apparent from a study of the ratio of piece work to day work report, such as, falling off of per cent of piece work to day work in relation to the period when the standards were set.

It is understood, of course, that all of the detail and distribution just described is carried through the general books by means of control accounts, which are finally cleared to the cost of finished product.

Conclusion

An attempt has been made in this article to present the manner in which labor is controlled at the source through the medium of executive control of employment and rate changes. Labor payment is controlled through proper records of services rendered, approved by the executive in immediate charge of the labor. It might be said that the labor has been secured and paid for and it now remains to properly control the use of it. The distribution records that have been described are designed almost exclusively with the thought in mind of furnishing the executives responsible with proper control figures.

As stated previously, this article has had to deal largely with generalities. To describe in detail our own system would consume too much space. The use of the tabulating machine in our business would alone take up considerable space; furthermore, we have found that methods in use in connection with tabulating machines are almost entirely peculiar to our own requirements.

In closing, there is one point that should be emphasized and that is that the control of labor can only be accomplished by furnishing the management with information that fits the requirements and focuses attention on abnormal or subnormal conditions which are in need of executive action.

The Following Material Was Supplied by Charles A. Williams, Comptroller, American Safety Razor Corporation, Brooklyn, N. Y.

In treating the primary elements which enter into the cost of manufacturing, namely, labor, material and overhead expense, the element of labor should give the least trouble. In handling labor costs, fixed values are dealt with in that the cost of labor by the hour or by the piece is a fixed amount for each employee. Therefore, if accurate record is kept of the number of hours and the number of units produced by each man, it is purely a matter of mathematics to convert these values into dollars. With a schedule of accounts against which cost are desired, the problem of allocating these labor values to the accounts is a simple matter of accounting and the total represents the money spent for labor in a given period. There are, however, certain considerations of importance in obtaining these results. The fact that the keeping of labor costs is not a difficult problem is likely to be the reason that it is in many cases poorly done, insufficient attention being given to many details which in the end results in erroneous cost figures.

It goes without saying that the first consideration is to make sure that no one is on the payroll who does not actually perform some service. This has a bearing on obtaining accurate costs because if a condition did exist wherein the payroll was inflated, the conclusions drawn from the resulting cost figures might be sufficiently in error to cause wrong decisions of manufacturing policy, resulting in important losses other than those directly attributable to the payroll inflation. The safeguard against this, of course, is the customary time clock, which is rung by each employee when entering and when leaving. In addition to the clock it is important that all overtime be approved by the foreman of each department, not only to discourage the practice of working overtime, but to guard against paying for overtime when no work is actually done.

Written authorizations for the addition of names to the payroll are important and should in all cases be used. The employment authorizations should be counter-checked by the timekeepers and in cases where employees' badges, locker keys, etc., are provided, these features give additional means for checking the correctness of additions to the payroll.

While the time clock checks the arrival and department of each employee, it is quite necessary and advisable to have timekeepers who actually check every man at his work several times daily. This checking, of course, can be combined with the obtaining of the distribution of each man's time for the cost accounts but even

where the distribution feature is unnecessary the employee, for obvious reasons, should be checked while actually at work.

After installing the necessary system for insuring the accuracy of the payroll as regards names and hours, consideration should be given to the correct distribution of the payroll expense to departments, jobs and operations. For this purpose supplementary time cards are advisable as the clock cards showing the entering and leaving time have served their purpose in that respect and it is unwise to attempt to combine with them any additional time checking for distribution purposes. Supplementary time cards are for the purpose of obtaining payroll distribution and can be handled by the time checkers in each department. When a man works on more than one job or operation, a number of cards would be made for the same man. These cards should show the employee's number, department, operation, quantity of production, hours and earnings. It is important that the supplementary cards be checked against the clock cards, thereby additionally safeguarding the clock card record and insuring that in the case of each employee the number of hours shown on the supplementary cards is not less than nor in excess of the hours indicated on the clock card. The balance in hours between each man's card and his supplementary cards prepared by the timekeepers is important and should be ascertained before proceeding further with any of the records.

In this connection a word might be said about the counting of the articles or units produced by each employee. Where the work is of a repetitive nature, this is easily done by placing automatic counters on the machines. Such work as cannot be counted in this manner may be laid out in trays or other containers of a stated capacity. The use of these two features will be found of considerable assistance in obtaining correct results.

Having obtained cards which show the work done by each man and having balanced them against each man's clock card, the next consideration is the correct tabulation of the data obtained by the timekeepers in checking the employees at their work, as shown by the supplementary cards. Where the volume of work warrants it, it is advisable to take advantage of the automatic tabulating machines which are now on the market and which are coming into more constant use every day. It does not take a great volume of work to make it worth while to use such a machine, and the accuracy of the results, to say nothing of the saving in clerical labor, certainly justifies their use wherever possible. Therefore, the cards prepared by the timekeepers should be designed for use on one of these tabulating machines. This may be done by having the left hand portion of the card designed to take data in writing, and the right hand portion designed for punching for the tabulating machine. This means, of course, that the various departments, jobs, operations and accounts of all kinds must be coded, but the coding of data of this sort does not present any great problem. It simply means a carefully prepared numerical code which should be flexible enough to permit of additions when necessary. After these cards are punched, the punching should be checked against the written portion of each card before the cards are tabulated. From these cards it is very easy to tabulate the earnings of each employee, the hours and amounts chargeable to each account, the quantity of each article produced, and any other data which may be desired.

The transferring of the figures thus obtained into the cost records is simply a matter of bookkeeping. The cost accounts to which the labor is distributed, of course, should be carefully laid out in order that the results may be intelligently applied.

An important function of labor cost is to measure the efficiency of the labor. To do this the figures obtained, which show the actual results should be measured against what is known should be produced in a given time under given conditions. The judgment of production should, of course, give consideration to the quality as well as the quantity. The quality is a matter of inspection and supervision. The quantity, however, is a matter of knowing what should be expected from each machine, if machine work is done, and from each bench, if hand work is done. Most plants have both machine work and hand work. At this point it is advisable to institute time studies conducted with the idea of finding out what may be considered normal production, and not with the idea of forcing abnormal production. Without going into the question of time studies in detail, the various purposes which they serve, and the various methods of making them, it is important to note that, regardless of other considerations, time studies should be made in every plant, even if they are very elementary, in order that there may be some measure of the efficiency of labor and something on which to base intelligent efforts to reduce labor costs.

There are other factors which, while they are not directly related to the control of labor, nevertheless may be the cause of excessive labor costs. One of these factors is to keep the material flowing smoothly to and away from the machines and work benches, and another factor is to keep the machines and all of the equipment free from breakdown in order to insure a minimum interruption of production. Any failure to cause either or both of these factors to function as efficiently as possible is sure to result in wasted time, inefficient work, and full value will not be obtained for the money expended for labor.

There are problems of detail in every plant which require solution, but these general considerations may help in laying a foundation upon which accurate and useful labor costs can be built.

The Following Material Was Supplied by David W. Hook, Consolidated Safety Pin Company, Bloomfield, N. J.

In compiling costs one should endeavor to have the system as simple as possible, so that the actual machinery in assembling the data would not be more expensive to operate than the results obtained would justify. This is liable to be especially true where the costs per unit are very small.

After years of experience I believe the following Process Labor Cost System, is about as simple and accurate as could be devised, and will meet the requirements in similar conditions.

Process Costs are obtained by taking the total production for a department or operation, for a certain period and dividing it into the total labor for the same period for that department or operation. The important thing is to accurately assemble the production, and all the labor belonging to that operation during the time specified, and where the operations are similar in a whole department, the labor costs will be sufficiently accurate to take the totals for that whole department.

To get the accurate production it is necessary to require that the production of each machine or operator be reported daily by a production ticket or other means, which would be assembled according to brands or sizes and a grand total made for the period desired. For most purposes it is not necessary usually to assemble the labor so minutely but only to get a total cost of the whole operation or department for that period. This is best accomplished by having all operators on the payroll arranged in the payroll book or sheets according to departments; also by productive and non-productive workers. In totalling the payroll each week the clerk will first make a total of each department, then a total of all the departments for the total payroll. These totals are copied on to a ten column analysis sheet with the symbols of the departments along the left hand margin. The first week's payroll for the period is written in the next column to the right, and the second in the next and so on for the period, say one month. Some months might have four weeks and some five; but care should be taken to compile the production and labor for exactly the same period.

At the end of the month totals for each department should be taken horizontally across the sheet, writing the totals in the sixth column. Some of the productive workers have doubtless been transferred during the month from one department to another "temporarily," on account of their machine being down for repair or other reasons. A careful record should be kept of these transfers on a

journal sheet; debiting the department receiving the worker and crediting the department from which the worker is sent. At the end of the period all the debits should equal the credits. These transfers should be indicated in the seventh and eighth columns of the labor analysis sheet referred to above, either subtracting or adding to the proper department as the case may be. In the ninth column could be entered any bonuses, or extra wages paid out during the month not appearing in the regular payroll book, so that the grand total made in the last or tenth column would equal the amount paid out for labor as indicated in the general books of the company.

For the productive labor the above totals are usually accurate enough but not so for the non-productive labor.

Doubtless there has been considerable maintenance and repair work done by the machine shop workmen for the different departments during the month. Also, some of the departmental machinists might work in more than one department, and it is necessary to have the time so spent properly indicated on time tickets or cards. A columnar analysis sheet should be kept for the non-productive workers for the month, a column provided for each department, and the different machines indicated in red ink in the proper column. Then as the different time tickets come in it is a simple matter to post the time and pay to the proper account quickly. The time of the machine shop could be written down in purple ink to distinguish it from the others, and a total made separately of this if desired. Care should be taken that the time of all inspectors, foremen, watchmen, weighers of work and other non-productive workers be properly posted to the proper account. The totals of each department should be made and compared with the payroll total, and a new revised total made, the grand total of which would equal the total of the payroll figures.

We now have the total production of each department, as well as the total productive and non-productive labor for the same period. It is a simple matter to divide the total production into each of these and so get the cost per unit for the month, which labor costs are reconciled with actual total cash paid out by the company.

All these different totals and costs for the period should be arranged so that comparison could be easily made for the different periods of the year and unfavorable conditions determined and means taken for correcting them.

A comparative record as follows.

COMPARATIVE PRODUCTION RECORD AND COST PER UNIT OF LABOR BY DEPARTMENTS

Department	January	February	March	April
Production 1st week	23,293	27,873	29,311	28,364
Production 2nd week	26,143	27,496	32,541	28,789
Production 3rd week	28,071	27,543	32,319	26,940
Production 4th week	28,083	22,831	33,074	29,235
Production 5th week	26,727	.....	.....	29,618
Total for month	132,317	105,743	127,245	142,946
Productive labor	$1,302	$1,049	$1,229	$1,308
Non-productive labor	1,092	862	836	1,038
Total labor	$2,394	$1,911	$2,065	$2,346
Cost 100 gr. productive labor	.99	.99	.96	.91
Cost 100 gr. non-productive labor	.84	.81	.66	.72
Cost 100 gr. total labor	1.83	1.80	1.62	1.63

W. H. Caswell Goes With Roller Paper Co.

WILKES-BARRE, Pa., October 6, 1924. W. H. Caswell, long identified in the northeastern part of the state, calling on the twine buyers, having represented the leading twine houses in Philadelphia and for the past several years with Megargee Brothers at Scranton, has associated himself with the Roller Paper Company at Wilkes-Barre, having complete charge of the Twine Department.

The Roller Paper Company carries a complete warehouse stock of fine printing paper, specialties, filing devices and stationery and has resident managers in Williamsport, Shamokin and Scranton.

Obituary

Arthur L. Rieger

DAYTON, Ohio, October 6, 1924.—Stricken by a relapse of heart trouble, Arthur L. Rieger, 58, president of the Peerless Paper Company and director of the Mead Pulp and Paper Company, died at his home on Wisteria drive Sunday, September 28.

One of the oldest in point of service of the men who developed paper-making as a Miami Valley industry, Mr. Rieger was forced reluctantly to abandon his business activities after his first attack a year and half ago when he tried to get back in harness on recovery. He devoted himself then to a fight for his health which only ended when death commanded.

Mr. Rieger was a typical example of the American business man who begins at the bottom and works to the top. Born, educated and given his debut in business in Dayton, he became closely associated with many civic bodies and movements looking to general social betterment.

Beginning his career as a paper maker with the H. E. Mead Company, he served an apprenticeship of nine years that ended with his going to the Mead Paper Company as bookkeeper from which position he climbed to directorship with the Mead interest and to presidency of the Peerless.

Mr. Rieger was married in Dayton to Miss Anna R. Dennewitz, daughter of Prof. Christian Dennewitz, February 19, 1891. She died just three years before their thirty-first wedding anniversary in 1922. He is survived by two sons, L. P. Rieger, president of the Rieger Investment Company, and N. M. Rieger, of the Peerless Paper Company; a sister, Mrs. Louise F. Berk, Dayton, and two grandchildren, James Rieger and Frederick Rieger.

Mr. Rieger was a thirty-second degree Scottish Rite Mason and a Noble of Antioch temple, a member of the Dayton City and Engineers' clubs and active in Y. M. C. A. work.

George W. Burnside

APPLETON, Wis., October 6, 1924.—George W. Burnside, well known paper man of Neenah, Wis., was instantly killed, when the auto which he was driving was struck by a Northwestern passenger train on the College Avenue crossing, Tuesday evening, September 23. Mr. Burnside apparently did not see the approaching train; his attention having been attracted by an automobile parade which was passing near the scene of the accident.

Mr. Burnside has been associated with the paper industry in Wisconsin for about thirty years and had many friends among the trade and mill men, who will regret to learn of his untimely death.

He was 58 years of age and as a young man was employed by the C. & N. W. R. R. as a telegraph operator. Later and for several years he was connected with the Falls Manufacturing Company of Oconto Falls, Wis., and in 1901 moved to Neenah to take a position with the Geo. A. Whiting Paper Company. His next step was the starting of the Lakeside Paper Company of which he was general manager until 1919 at which time it was sold to the present owners. At the time of his death he was president of the Burnside Paper Company and general manager of the Valley Paper Mills, Neenah.

Mr. Burnside was also very prominent in public life, being secretary of the Board of Education, secretary of the Police and Fire Commission and a director of the Neenah Club. He was a member of the Masonic Fraternity and the funeral services were conducted by them.

Montebello Envelope Corp. in New Building

BALTIMORE, Md., October 7, 1924.—The Oles Envelope Corporation, manufacturer of plain and printed envelopes, is now located in its new daylight, one floor building on Montebello avenue near 25th street in this city.

NEW MACHINE TO MAKE BAGS IN CONTINUOUS STRIPS

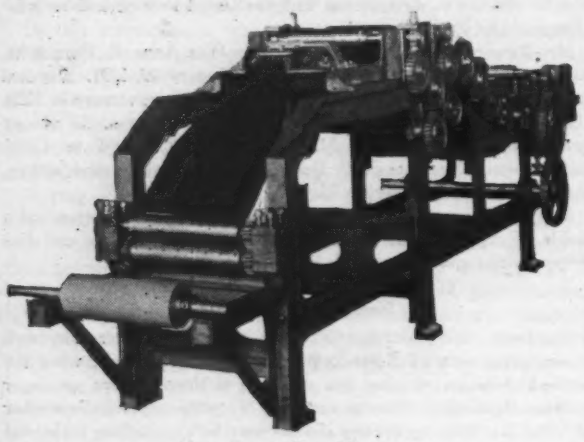
A new bag machine has recently been patented which will be of more than ordinary interest to the trade because of various unique features. It represents several years of persistent effort on the part of the inventor, who labored under adverse conditions incident to the World War and who was subjected to long and tedious delays before his invention could be perfected and until the first patent was granted on the continuous bag, or bags in rolls, which has already been briefly referred to in the PAPER TRADE JOURNAL.

The machine is designed to make paper bags in continuous form in one piece of paper, the bags being attached to each other by narrow strips three sixteenths, to one quarter inch wide, at the extreme corners of the bottom and at the top of the adjoining bags.

These narrow connecting strips are four thicknesses of paper, and never break in the process of manufacture. The corners of the bottom of the bags are gummed on the inside to insure against leakage when the bags are detached.

This is a novel feature of the new machine, and the one upon which its commercial success chiefly depends.

The gumming of the corners reinforces the bottom and this is



NEW PAPER BAG MACHINE

another advantage in connection with the easy opening feature. This is the initial operation and consists of creasing or scoring the paper in the flat, clear across its width. This enables the bags to bend outwardly, when opened and, supplemented with right angle scorings in the opposite direction, to bend inwardly. Thus is completed the easy opening feature.

The successive operations follow each other in the requisite order conforming to the structure of the bag.

The machine is purely rotary, and the moving web lends itself to each operation without tear or strain in spite of the high speed. Each machine is built to make but one size bag this being conducive to high efficiency.

In the opinion of competent judges, it will surpass in output any type of bag machine heretofore produced, and will reduce the cost of manufacture very materially, for it is designed to bundle the bags automatically and requires but one operator.

The automatic bundling is a simple operation, consisting of scoring the connecting strips in opposite directions, alternately, which permits the moving web of bags to flow from the machine to zig-zag formation, downwardly, to the automatic bundler.

The bags are counted automatically in lots of from 100 to 500. The machines weigh from 1,500 to 2,000 pounds, and can be built at approximately the same cost as the average bag machines now in use.

Convenient racks are provided to dispense the bags in the stores. These are designed to be suspended from the ceiling by means of adjustable rods. The racks contain from three to ten flat wire baskets to meet the needs of the various departments. Each basket holds from 100 to 500 bags, according to size. The bags come out, bottom first, from the bottom of the baskets; then through a flexible spring platform, provided with suitable means to prevent more than one bag from being withdrawn at a time. The platform is automatically pulled down, as soon as the second bag is stopped, bringing the connecting strips in contact with knives on the bottom of the rack as shown in the illustration.

This method of holding the bags in the stores has been indorsed by storekeepers

As soon as one bag is withdrawn the platform returns instantly to its normal position. The downward stroke against the knives is two inches, and the cutting of the connecting strips offers no preceptable resistance. The platform is always provided with a bag in convenient position to grasp.

The baskets can be reloaded instantly. The bags are always clean and smooth and never stuck together, as in the present method of distribution. The entire scheme has been carefully worked out, and is the culmination of careful investigation among hundreds of merchants.

An agreement was arrived at sometime ago with strong financial interests identified with the paper manufacturing industry, to take over the exclusive license covering a large section of the United States, this being contingent upon the commercial success of the new bag machine, and upon the allowance of the patent which comprises 46 claims.

A careful analysis of the technical and industrial aspect of the paper bag industry, discloses the need for improvement by the application of superior methods of distribution, and processes of manufacture to an old established industry, which, it seems, has made little advancement in the last twenty five years, in correcting the defects and inconveniences in the present methods of dispensing paper bags in the stores.

The patents are controlled by the Standard Paper Bag Company, Peoples Gas Building, Chicago.

Paper Employees Give Fall Fair

KALAMAZOO, Mich., October 6.—Fruits, cut flowers, vegetables and fancy work in great profusion, arranged on long tables in the welfare department of the Kalamazoo Paper Company, constitutes an interesting display, the first fall fair given by the employees of that concern. This event, which is an innovation in local industrial welfare activities, is under the management and direction of Mrs. Maud Young and is the outgrowth of the Kalamazoo Paper Company's garden club, formed three years ago. It is designed to show the results of the development of the club's progress.

The first fair has enlisted exhibits from 150 employees. The vegetable display is unusually high class and varied and includes everything usually found in the well kept Michigan garden. An innovation is a fully developed tobacco plant. This was grown by Louis Weisser, one of the company's oldest employees. He raises and cures his own tobacco for pipe smoking.

Women employees of the mill are represented by a fine line of fancy work, most of the articles being done at odd hours. There are examples of embroidery, needle work, knitting and crochet work and hand lace work.

All the articles have been judged by a committee, consisting of Miss Louise F. Schneider, Gilmore Brothers; Mrs. Helen C. Statler, Mrs. Karl Kleinstuck, Miss Irene Kleinstuck and Harold Gilkey.

Cash prizes amounting to over $100 and including five firsts, seconds and thirds, also several specials will be awarded at the Kalamazoo Paper Company's annual winter picnic, which will be held at the Masonic Temple.

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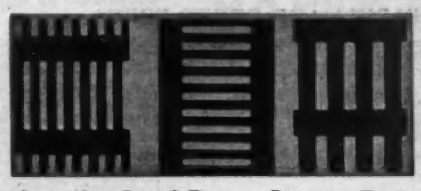

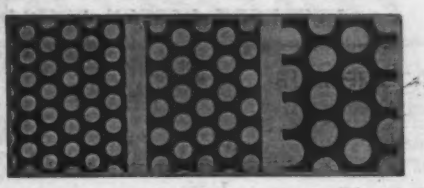

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NEW YORK IMPORTS

WEEK ENDING OCTOBER 4, 1924

SUMMARY

News print.....669 rolls, 789 bls.
Printing paper.....109 bls., 178 cs., 527 rolls
Wall paper.....245 bls., 3 cs.
Packing paper.....529 bls., 7 pgs., 4 cs.
Wrapping paper.....693 bls., 11 cs.
Drawing paper .....1 cs.
Cigarette paper .....2,612 cs.
Writing paper .....14 cs.
Paper hangings .....60 bls., 4 cs.
Tissue paper .....75 cs.
Filter paper .....10 cs.
Marble paper .....5 cs.
Surface coated paper.....69 cs.
Hanging paper .....292 rolls
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CIGARETTE PAPER

L. Kehlman & Co., Virgilia, London, 1 cs.
Liggett & Myers Tobacco Company, Liberty, Havre, 23 cs.
Standard Products Corporation, by same, 40 cs.
Standard Products Corporation, Rochambeau, Havre, 28 cs.
R. J. Reynolds Tobacco Company, Zarembo, St. Nazaire, 1,200 cs.
De Manduit Paper Corporation, by same, 86 cs.
American Tobacco Company, Zarembo, Bordeaux, 1,200 cs.
P. J. Schweitzer, France, Havre, 27 cs.
Suarez & Cresps, C. Espartel, Alicante, 7 cs.

PAPER HANGINGS

A. C. Dodman, Jr., Inc., Laconia, Liverpool, 15 bls.
A. C. Dodman, Jr., Inc. Franconia, Liverpool, 38 bls.
First National Bank, Ohio, Hamburg, 2 bls.
W. H. S. Lloyd & Co., Minnetonka, London, 5 bls., 4 cs.

WALL PAPER

A. C. Dodman, Jr., Inc., Olympic, London, 7 bls., 2 cs.
A. C. Dodman, Jr., Inc., Belgenland, Antwerp, 1 cs., 3 bls.
F. J. Emmerich, Aquitania, London, 1 bl.
Drinhausen-Hollkott Paper Company, N. Amsterdam, Rotterdam, 234 bls.

HANGING PAPER

Drinhausen-Hollkott Paper Company, Orea, Hamburg, 292 rolls.

NEWS PRINT

Fernstrom Paper Company, Inc., Brabeholm, Rundsvall, 100 rolls.
Seaman Paper Company, Waukegan, Rotterdam, 40 rolls.
J. P. Heffernan Paper Company, Pr. Wilson, Trieste, 88 rolls, 594 bls.
Parsons & Whittemore, Stuttgart, Bremen, 441 rolls.
International Acceptance Bank, Hausa, Hamburg, 195 bls.

PRINTING PAPER

Schenckers, Inc., Hansa, Hamburg, 36 bls.
B. F. Drakenfeld & Co., Franconia, Liverpool, 36 cs.
Seaman Paper Company, Arabic, Hamburg, 114 rolls.
B. F. Drakenfeld & Co., Cedric, Liverpool, 29 cs.
Bank of New York, Stavangerfjord, Frederickstad, 413 rolls.
J. P. Heffernan Paper Company, Pres. Wilson, Trieste, 72 bls.
Maurice O'Meara Company, Stuttgart, Bremen, 33 cs.
H. Reeve Angel & Co., Inc., by same, 1 bl.
Traders' Paper Company, Yeifuker Maru, Hamburg, 20 cs.
E. Dietzgen & Co., by same, 60 cs.

WRAPPING PAPER

D. S. Walton & Co., Hansa, Hamburg, 283 bls.
Lamb, Finlay & Co., Incemore, Belfast, 3 cs.
Chemical National Bank, Arabic, Hamburg, 410 bls.
Bernard Judae & Co., Kungsholm, Gothenburg, 8 cs.

PACKING PAPER

Maurice O'Meara Company, N. Amsterdam, Rotterdam, 475 bls.
H. D. Catty Company, by same, 7 pgs.
Hensel, Bruckman & Lorbacher, by same, 4 cs.
J. P. Heffernan Paper Company, Hansa, Hamburg, 54 bls.

KRAFT PAPER

Manhattan Paper Company, Kungsholm, Gothenburg, 471 rolls.
Arkell Safety Bag Company, by same, 104 rolls.

TISSUE PAPER

F. C. Strype, Laconia, Liverpool, 30 cs.
F. C. Strype, Franconia, Liverpool, 3 cs.
Meadows, Wye & Co., Cedric, Liverpool, 35 cs.
Brooks Paper Company, by same, 7 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 10 cs.

DRAWING PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 1 cs.

WRITING PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 1 cs.
John Wanamaker, Aquitania, Havre, 1 cs.
Guibout Freres, by same, 12 cs.

GLAZED PAPER

Whiting & Patterson, Inc., Y. Maru, Hamburg, 73 cs.

TRACING PAPER

E. Dietzgen & Co., Waukegan, Rotterdam, 11 cs.

COLORED PAPER

C. W. Williams, Belgenland, Antwerp, 7 cs.

SURFACE COATED PAPER

P. C. Zuhlke, Belgenland, Antwerp, 69 cs.

MARBLE PAPER

L. de Jonge & Co., Belgenland, Antwerp, 5 cs.

METAL PAPER

Perry, Ryer & Co., Republic, Bremen, 4 cs.

PAPER

M. M. Cohen, Kungsholm, Gothenburg, 31 bls., 512 rolls.
Universal Paper Company, by same, 275 rolls, 42 bls.
Gilbert Paper Company, by same, 114 bls., 10 rolls.
Japan Paper Company, by same, 4 cs.
Coenca Morrison & Co., Rochambeau, Havre, 12 cs.
E. L. Garvin Company, by same, 6 cs.
International Forwarding Company, by same, 32 bls.
Judson Freight Forwarding Company, by same, 9 cs.
Rose & Frank, De Grasse, Havre, 6 bls.
Massee & Co., N. Amsterdam, Rotterdam, 3 cs.
Drinhausen Hollkott Paper Company, Stuttgart, Bremen, 189 rolls.
E. Dietzgen & Co., Hansa, Hamburg, 8 cs.
G. Gennert, by same, 12 cs.
Fernstrom Paper Company, Inc., by same, 152 rolls.

RAGS, BAGGING, ETC.

L. H. Abenheimer, Arabic, Hamburg, 146 bls. rags.
International Acceptance Bank, by same, 154 bls. rags.
Castle & Overton, Inc., Minnetonka, London, 21 bls. rags.
Katzenstein & Keene, Inc., by same, 59 bls. rags.
Amsinck, Sonne & Co., by same, 66 bls. rags.
R. Ingram & Co., Liberty, Dunkirk, 53 bls. rags.
Equitable Trust Company, by same, 43 bls. rags.
Castle & Overton, Inc., by same, 80 bls. rags.
Albion Trading Company, by same, 228 bls. rags.
E. J. Keller Company, Inc., Liberty, Havre, 36 bls. new cuttings.
Whaling Waste Products Company, by same, 78 bls. jute waste.
Bemis Brothers, Hellen, Barcelona, 32 bls. rags.
Katzenstein & Keene, Inc., by same, 116 bls. rags, 46 bls. new cuttings.
Amsinck, Sonne & Co., Cedric, Liverpool, 19 bls. rags.
E. J. Keller Company, Inc., Oscar II, Copenhagen, 185 bls. rags.
Castle & Overton, Inc., by same, 254 bls. rags.
Chemical National Bank, Albania, Hamburg, 113 bls. rags.
Belgian Bank, by same, 104 bls. bagging.
Guaranty Trust Company, Rochambeau, Havre, 26 bls. rags.
E. J. Keller Company, Inc., Zarembo, Bordeaux, 119 bls. rags.
Manufacturers' Trust Company, by same, 142 bls. rags.
Goldman, Sachs & Co., Zarembo, St. Nazaire, 136 bls. rags.
J. Abela & Co., Lucia, Trieste, 80 bls. rags.
E. J. Keller Company, Inc., by same, 131 bls. rags.
L. H. Abenheimer, by same, 265 bls. rags.
L. H. Abenheimer, Lucia, Venice, 77 bls. rags.
Castle & Overton, Inc., Bay State, Dundee, 78 bls. thread waste.
P. Berkowitz, Mercier, Antwerp, 227 bls. rags.
Guaranty Trust Company, by same, 27 bls. thread waste.
W. Schall & Co., Hansa, Hamburg, 16 bls. rags.
Chase National Bank, by same, 55 bls. rags.
Overton & Co., by same, 68 bls. rags.
Stone Brothers Company, Zaremho, 432 bls. rags.
Stone Brothers Company, Cabo Espartel, 229 bls. rags.
Stone Brothers Company, Incemore, 87 bls. rags.
Stone Brothers Company, Fluor Spor, 26 bls. rope.
Stone Brothers Company, by same, 90 bls. strings.
Stone Brothers Company, by same, 144 bls. rags.
Stone Brothers Company, Tjaldur, 162 bls. rags.
Stone Brothers Company, Baystate, 54 bls. rags.
Stone Brothers Company, Merican, 254 bls. rags.
Stone Brothers Co., Hector, 139 bls. rags.
Stone Brothers Company, by same, 880 bls. rags.
Stone Brothers Company, West Eleasco, 301 bls. rags.
Stone Brothers Company, Cabo Villano, 463 bls. rags.
Stone Brothers Company, Cabo Creux, 61 bls. rags.
Stone Brothers Company, Bilderdijk, 113 bls. rags.
Stone Brothers Company, Binendijk, 295 bls. rags.
Stone Brothers Company, Texas Maru, 47 bls. rags.
Stone Brothers Co., Hecktor, 121 bls. rags.
Stone Brothers Company, Liberty, 484 bls. rags.
Stone Brothers Company, Spain Maru, 233 bls. rags.
Stone Brothers Company, Suffern, 58 bls. rags.
Stone Brothers Company, Texas Maru, 109 bls. rags.
Stone Brothers Company, Spain Maru, 95 bls. rags.
Stone Brothers Company, Liberty, 1145 bls. rags.
S. Birkenstein Sons, N. Amsterdam, Rotterdam, 112 bls. baggings.
National City Bank, by same, 57 bls. rags.
Chemical National Bank, by same, 44 bls. rags.
E. J. Keller Company, Inc., by same, 76 bls. rags, 652 bls. bagging.
Brown Brothers & Co., by same, 137 bls. paper stock.
Whaling Waste Products Company, by same, 71 bls. old linens.
Maurice O'Meara Company, by same, 37 bls. bagging.
Atterbury & McKelney, by same, 126 bls. rags.

(*Continued on page 60*)

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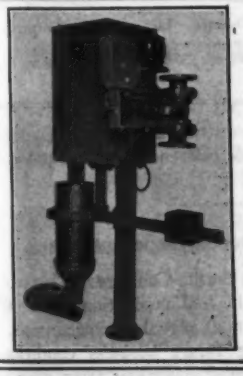

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Imports of Paper and Paper Stock

(*Continued from page 58*)

OLD ROPE

Bemis Brothers Bag Company, Hellen, Barcelona, 76 coils.
W. Schall & Co, by same, 59 coils.
De Graw Aymer & Co., Minnetonka, London, 91 coils.
Ellerman's Wilson Line, by same, 150 coils.
E. J. Keller Company, Inc., Oscar II, Copenhagen, 495 coils.
E. J. Keller Company, Inc., Oscar II, Aalborg, 10 coils.
E. J. Keller Company, Inc., Oscar II, Aakhus, 74 coils.
U. S. Mortgage & Trust Company, Albania, Hamburg, 13 coils, 22 bls.
Brown Brothers & Co., Belgenland, Antwerp, 110 bls.
Castle & Overton, Inc., Topdalsfjord, Bergen, 62 coils.
Castle & Overton, N. Amsterdam, Rotterdam, 73 coils.
G. M. Graves Company, by same, 23 coils.
U. S. Mortgage & Trust Company, N. Amsterdam, Rotterdam, 16 coils.
Brown Brothers & Co., Hansa, Hamburg, 28 coils.

CASEIN

Kalbfleisch Corporation, Pan America, Buenos Aires, 885 bags.
West Virginia Pulp & Paper Company, Casper, Buenos Aires, 417 bags, 25,020 kilos.
Bank of London and South America, Voltaire, Buenos Aires, 1,667 bags.

WOOD PULP

M. Gottesman & Co., Inc., Braheholm, Sunsvall, 5,500 bls. sulphate pulp.
M. Gottesman & Co., Inc., Braheholm, Esnik, 600 bls., sulphite pulp.
Wilson, Lyon & Co., Inc., by same, 125 bls. chemical pulp.
Johaneson, Wales & Sparre, Inc., by same, 2,100 bls. sulphite pulp.
Price & Pierce, Ltd., Braheholm, Gothenburg, 1,200 bls. sulphite pulp.
Scandinavian Pulp Agency, Inc., Kungsholm, Gothenburg, 254 bls. sulphite pulp.
Price & Pierce, Ltd., by same, 800 rolls wood pulp.
Nilsén, Lyon & Co., Inc., Stavangerfjord, Gothenburg, 200 bls. wood pulp.
Atterbury & McKelney, Stavangerfjord, Kristiania, 450 bls. sulphite pulp.
E. M. Sergeant & Co., by same, 300 bls. chemical pulp.
J. Anderson & Co., Stavangerfjord, Sarpsborg, 300 bls. sulphite pulp.
Ira L. Beebe & Co., Orca, Hamburg, 4,185 bls. wood pulp.
Castle & Overton, Inc., by same, 860 bls. wood pulp.
Scandinavian Pulp Agency, Inc., Oscar II, Copenhagen, 127 bls. wood pulp.
Guaranty Trust Company, by same, 600 bls. wood pulp.
Hartig Pulp Company, Bremen, Bremen, 275 bls. wood pulp.
Bulkley, Dunton & Co., by same, 1,075 bls. wood pulp.
E. J. Keller Company, Inc., Waukegan, Rotterdam, 233 bls., 51 tons wood pulp.
New York Trust Company, Pr. Wilson, Trieste, 1,029 bls. wood pulp.
New York Trust Company, Lucia, Trieste, 289 bls. wood pulp.
National City Bank, by same, 246 bls. wood pulp.
M. Gottesman & Co., Inc., Lucia, Sibenico, 6,400 bls. wood pulp.
R. Gair Company, Nordhanet, Port Alfred, 11,573 bls. wood pulp.
Tidewater Papermills Company, Barnholm, Murray Bay, 6,249 bls. wood pulp.
Buck Kiaer & Co., Inc., Topdalsfjord, Greaker, 1,080 bls., 218 tons sulphite pulp.
J. Anderson & Co., by same, 2,160 bls., 365 tons sulphite pulp.
M. Gottesman & Co., Inc., N. Amsterdam, Rotterdam, 750 bls. wood pulp.
Hartig Pulp Company, Y. Maru, Hamburg, 500 bls., 103 tons wood pulp.
Hartig Pulp Company, Ohio, Hamburg, 1,300 bls. wood pulp.
Castle & Overton, Inc., by same, 1,435 bls. wood pulp.
Ira L. Beebe & Co., by same, 2,058 bls. wood pulp.

WOOD PULP BOARDS

Lagerloef Trading Co., Stuttgart, Bremen, 216 bls. wood pulp.

WOOD FLOUR

B. L. Soberski, Kungsholm, Gothenburg, 983 bags.
B. L. Soberski, Stavangerfjord, Frederickstad, 1,500 bags.
A. Kramer & Co., Waukegan, Rotterdam, 500 bags sawdust, 25,000 kilos.

BALTIMORE IMPORTS

WEEK ENDING OCTOBER 4, 1924

M. Gottesman & Co., Inc., West Maximus, Kotka, 1,576 bls. wood pulp.
M. Gottesman & Co., Inc., Trolleholm, Sundsvall, 9,500 bls. wood pulp.
M. Gottesman & Co., Inc., J. Maersk, Stockholm, 3,000 bls. wood pulp.
M. Gottesman & Co., Inc., Spain Maru, Hamburg, 900 bls. wood pulp, 138 tons.
National City Bank, by same, 864 bls. wood pulp, 130 tons.
Castle & Overton, ———, Hamburg, 2,620 bls. wood pulp.
Lagerloef Trading Co., West Maximus, 2,823 bls. wood pulp.

NEW ORLEANS IMPORTS

WEEK ENDING OCTOBER 4, 1924

Castle & Overton, Edam, Antwerp, 302 bls. rags.
Castle & Overton, Mont Viso, France, 49 bls. rags.
Castle & Overton, Edam, Rotterdam, 228 bls. rags.

PORTLAND IMPORTS

WEEK ENDING OCTOBER 4, 1924

Ira L. Beebe & Co., Topdalsfjord, Konigsberg, 5,000 bls. wood pulp, 1,000 tons.

BOSTON IMPORTS

WEEK ENDING OCTOBER 4, 1924

Baring Bros., Ltd., Mercian, Liverpool, 245 bls. old rags, 169 bls. new rag cuttings.
T. D. Downing & Co., by same, 123 bls. old rags.
F. S. Webster & Co., by same, 5 cases tissue.
G. W. Malcolm, by same, 12 cases tissue.
Brown Bros. Co., by same, 113 bales old rope.
Geo. M. Graves, Sac City, Rotterdam, 187 bls. old rags.
On order, by same, 176 bls. old rags.
Castle & Overton, by same, 1,145 bls. wood pulp.
Geo. M. Graves, by same, 153 bls. old rags.
Grimes & Friedman, Margaret Dollar, Vancouver, 662 bls. scrap magazines.
Crocker Burbank, Anacordes, Glasgow, 61 bls. waste paper.
J. B. Moore & Co., by same, 375 bls. waste paper.
F. A. Chase & Co., Missouri, Antwerp, 83 rolls building paper.

PHILADELPHIA IMPORTS

WEEK ENDING OCTOBER 4, 1924

J. G. Neidinger, Y. Maru, Hamburg, 10 cs. crepe paper.
S. S. Alcorn, by same, 179 rolls kraft paper.
Castle & Overton, Inc., by same, 321 bls. rags.
A. H. Searle, by same, 41 bls. rags.
Stone Bros., by same, 201 bls. rags.
D. J. Murphy, by same, 98 bls. rags.
Castle & Overton, Inc., Imoko, Antwerp, 90 bls. rags.
Castle & Overton, Inc., K. Maru, Hamburg, 97 bls. rags.
Castle & Overton, Inc., Konigsberg, Hamburg, 103 bls. rags.
Stone Bros., Liberty, Havre, 155 bls. rags.
Stone Bros., by same, 104 bls. new cuttings.
Stone Bros., by same, 48 bls. bagging.
Katzenstein & Keene, Inc., by same, 132 bls. rags.
E. J. Keller Co., Inc., by same, 54 bls. bagging.
S. Birkenstein & Sons, by same, 91 bls. rags.
I. Milton Hagy Waste Works, Liberty, Dunkirk, 156 bls. rags.
Stone Bros., by same, 498 bls. rags.
Castle & Overton, Inc., by same, 412 bls. rags.
Castle & Overton, Inc., Zarembo, Bordeaux, 268 bls. rags.
Stone Bros., by same, 432 bls. rags.
Stone Bros., Zarembo, St. Nazaire, 95 bls. rags.
E. J. Keller Co., Inc., by same, 346 bls. rags.
J. A. Steer Co., Bay State, Leith, 132 bls. rags.
E. J. Keller Co., Inc., Coaxet, Antwerp, 77 bls. rags.
E. J. Keller Co., Inc., Imoko, Antwerp, 39 bls. rags.
E. J. Keller Co., Inc., Hektor, Barcelona, 86 bls. rags.
Stone Bros., Liberty, Havre, 194 coils old rope.
S. Birkenstein & Sons, Bay State, Leith, 92 coils old rope.
Castle & Overton, Inc., ———, Germany, 685 bls. wood pulp.
Castle & Overton, Inc., Deuel, Germany, 545 bls. wood pulp.

No Increase in German Export Prices

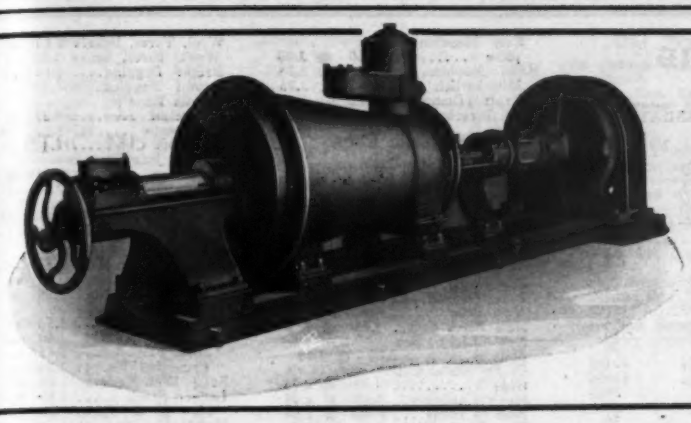
[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., October 1, 1924.—There is little likelihood of an advance in German export prices of paper products within the coming months, notwithstanding the recent increases in prices of Scandinavian and other European papers, according to a report to the Paper Division of the Department of Commerce from Trade Commissioner William T. Daugherty, at Berlin.

The situation in the domestic market, says the report, is so unsatisfactory that German paper mills are forced to maintain their export trade at all costs if they are to operate at all, and this being the case it is generally thought that export prices for German papers will be quoted low enough to insure a successful competitive position in foreign markets with little reference to the actual cost of production.

Coal Production Exceeds Expectations

John H. Jones, president of the Bertha-Consumers Company of Pittsburgh, says that the increase in coal production to 10,000,000 tons for the week ending September 20 exceeded expectations. Mr. Jones is very optimistic regarding future business conditions in general and looks for greatly improved conditions from now on in the coal industry.



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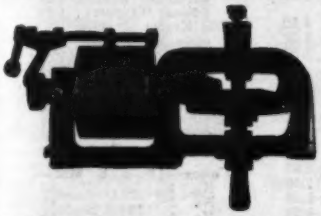

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Paper Manufacturers who carefully check manufacturing costs, and also strive to produce more and better paper at a lower cost per ton, prefer the unvarying quality and long service of ORR felts. A trial of them will bring about a preference that will be lasting.

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Market Quotations

PAPER SECURITIES CLOSING PRICES TUESDAY

Reported by Stewart Tuttle & Co., Inc., 120 Broadway, New York

Stocks	BID	ASKED
Abitibi Power and Paper Company, Ltd.	57	57¼
Abitibi Power and Paper Company, Ltd. Pfd.	98¼	99
American Writing Paper Company, Pfd.	2¾	2½
Brompton Pulp and Paper Company, Ltd.	31	31¾
Donnacona Paper Company, Ltd.	45	50
Donnacona Paper Company, Ltd., Pfd.	98	100
International Paper Company	45¼	45¾
International Paper Company, Pfd.	72	74
Laurentide Company, Ltd.	82½	82¾
Price Brothers	41	41¼
St. Maurice Paper Co., Ltd.	84	86
Smith (Howard) Paper Mills, Ltd.	25	28
Spanish River Pulp and Paper Mills, Ltd.	104½	104¾
Spanish River Pulp and Paper Mills, Ltd., Pfd.	116¼	116¾
Union Bag and Paper Corp.	38	38½
Wayagamack Pulp and Paper Company, Ltd.	36	38
West Virginia Pulp and Paper Company	53	58

Bonds	BID	ASKED
Abitibi Power and Paper Company, Ltd., 1st 6s, 1934	100	101
Abitibi Power and Paper Company, Ltd., Gen. 6s 1940	96	98
Abitibi Power and Paper Company, Ltd., Con. 8s 1931	102½	103½
Belgo Canadian Paper Company, 1st 6s 1943	97¾	98
Brown Company Serial 6s	97½	98½
Carthage Sulphite Pulp and Paper Company, 1st 8s 1941	35	50
Continental Paper and Bag Mills Corporation, 1st and Ref. 6½s, Series "A," 1944	94	95
Donnacona Paper Company, Ltd., 1st 6s 1940	98	100
Eddy Paper Company, 1st 7½s 1931	93	95
Gair (Robert) Company, 1st 7s 1937	99	99¼
International Paper Company, 1st and Ref. 5s (Series "B") 1947	86	86¾
Mattagami Pulp and Paper Company, 1st 6s 1937	58	60
Mattagami Pulp and Paper Company, 1st 7s 1949	20	25
Oswego Falls Corporation, 1st 8s 1942	101½	102
Oxford Paper Company, 1st and Ref. 6s (Series "A") 1947	99½	101½
Parker, Young Company, 1st 6½s 1944	95½	97½
Paterson Parchment Paper Company, 1st 6s (Series "A") 1938	96½	98½
Peshtigo Paper Company, 1st 7s (Series "B") 1942	92	94
Price Bros. & Co., Ltd., 1st 6s (Series "A") 1943	98¾	99¾
Provincial Paper Mills, Ltd., 1st 6s 1940	98	100
Riordon Pulp and Paper Company, Ltd., Gen. 6s 1929	25½	30
Riordon Pulp and Paper Company, Ltd., 6s 1942	91	93
Riordon Company, Ltd., 1st and Ref. 8s 1940	98½	99
River Raisin Paper Company, 1st 8s 1936	103	104
Smith (Howard) Paper Mills, Ltd., 6s 1934	95	95½
Smith (Howard) Paper Mills, Ltd., 1st Ref. 7s 1941	90	95
Spanish River Pulp and Paper Mills, Ltd., 1st 6s 1931	102½	103
Spanish River Pulp and Paper Mills, Ltd., Gen. 8s 1941	106	106½
Wayagamack Pulp and Paper Company, Ltd., 1st 6s 1951	74	77

Paper

F. o. b. Mill		
Ledgers	11.00	@28.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@30.00
Superfine	14.00	@30.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.65	@ 3.90
Rolls, transit	3.75	@ 4.25
Sheets	4.15	@ 4.40
Side Runs	3.25	@ 4.00
Book, Cased—		
S. & S. C.	8.00	@ 9.50
M. F.	7.00	@ 8.85
Coated and Enamel	9.00	@15.00
Lithograph	9.00	@14.00
Tissues—		
White No. 1	.75	@ .90
White No. 2	.70	@ .80
Colored	1.05	@ 1.90
Anti-Tarnish	1.40	@ 2.30
Kraft	.90	@ 1.00
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	5.50	@ 6.25
No. 2 Domestic	5.00	@ 5.75
Imported	5.50	@ 5.75
Manila—		
No. 1 Jute	9.00	@
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.00
Fibre Papers—		
No. 1 Fibre	5.50	@ 5.75
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.50	@ 2.75
S. Screening	3.25	@ 3.75
Card Middler	4.00	@ 5.00

Boards—per ton—		
News	50.00	@52.50
Straw	50.00	@55.00
Chip	37.50	@42.50
Binders' Boards	75.00	@80.00
Sgl. Mla. Ll. Chip	55.00	@62.50
Wood Pulp	70.00	@75.00
Container	62.50	@67.50
Sulphate Screenings—		
Coarse	.80	@ .90
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	12.00	@15.00
Bleached, basis 20 lbs.	14.00	@17.00

Mechanical Pulp

(Ex-Dock)		
No. 1 Imported	35.00	@40.00
(F. o. b. Mill)		
No. 1 Domestic	27.50	@34.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)		
Sulphite (Imported)—		
Bleached	3.75	@ 4.50
Easy Bleaching	2.90	@ 3.15
No. 1 strong unbleached	2.75	@ 3.00
No. 2 strong unbleached	2.50	@ 2.75
No. 1 Kraft	2.75	@ 2.85
Sulphate—		
Bleached	3.50	@ 3.65
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	3.50	@ 4.50
Easy Bleaching Sulphite	2.60	@ 3.00
News Sulphite	2.50	@ 2.75
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.75	@ 3.00
Soda Bleached	3.90	@ 4.10

Domestic Rags

New Rags		
Prices to Mill, f. o. b. N. Y.		
Shirt Cuttings—		
New White, No. 1	14.00	@15.00
New White, No. 2	7.00	@ 7.75
Silesias, No. 1	8.75	@ 9.25
New Unbleached	10.50	@11.00
Washables	5.50	@ 6.15
Fancy	6.50	@ 7.75
Blue Overall	7.75	@ 8.25
New Blue	5.00	@ 5.50
New Black Soft	4.75	@ 5.25
New Light Seconds	3.00	@ 3.25
O. D. Khaki Cuttings	4.50	@ 4.75
Men's Corduroy	4.00	@ 4.25
New Canvas	7.00	@ 7.50
New Black Mixed	2.75	@ 3.00

Old Rags		
White, No. 1—		
Repacked	6.25	@ 6.50
Miscellaneous	5.50	@ 5.75
White, No. 2—		
Repacked	4.25	@ 4.50
Miscellaneous	3.75	@ 4.00
St. Soiled, White	3.00	@ 3.50
Thirds and Blues—		
Repacked	4.00	@ 4.25
Miscellaneous	3.00	@ 3.25
Black Stockings	3.50	@ 3.75
Roofing Rags—		
Cloth Strippings	1.90	@ 2.00
No. 1	2.40	@ 2.50
No. 2	2.30	@ 2.40
No. 3	1.20	@ 1.30
No. 4	1.20	@ 1.30
No. 5A	1.80	@ 1.50

Foreign Rags

New Light Silesias	7.50	@ 8.75
Light Flannelettes	8.00	@ 8.25
Unbl'chd Cottons	9.50	@10.00
New White Cuttings	11.50	@12.50
New Light Oxfords	7.75	@ 8.25
New Light Prints	7.25	@ 7.75
New Mixed Cuttings	3.25	@ 3.75
New Dark Cuttings	3.00	@ 3.50
No. 1 White Linens	10.00	@11.00
No. 2 White Linens	7.00	@ 8.00
No. 3 White Linens	6.00	@ 6.50
No. 4 White Linens	4.50	@ 5.50
Old Extra Light Prints	4.50	@ 5.00
Ord. Light Prints	3.00	@ 3.50
Med. Light Prints	2.40	@ 2.50
Dutch Blue Cottons	3.50	@ 4.00
Ger. Blue Cottons	3.00	@ 3.25
Ger. Blue Linens	3.50	@ 4.00
Checks and Blues	2.25	@ 2.50
Dark Cottons	1.50	@ 1.75
Shoppery	1.40	@ 1.60
French Blues	3.25	@ 3.75

Bagging

Prices to Mill F. o. b. N. Y.		
Gunny No. 1—		
Foreign	1.80	@ 2.00
Domestic	1.75	@ 2.00
Wool, Tares, light	1.50	@ 1.60
Wool, Tares, heavy	1.50	@ 1.60
Bright Bagging	1.50	@ 1.60
Sound Bagging	.90	@ 1.00
Manila Rope—		
Foreign	6.25	@ 6.50
Domestic	6.50	@ 6.75
New Bu. Cut	2.40	@ 2.60
Hessian Jute Threads—		
Foreign	2.25	@ 2.50
Domestic	2.10	@ 2.20

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.50	@ 3.75
Hard, White, No. 2	3.25	@ 3.50
Soft, White, No. 1	3.00	@ 3.25
Flat Stock—		
Stitchless	1.50	@ 1.60
Over Issue Mag.	1.60	@ 1.70
Solid Flat Book	1.45	@ 1.55
Crumpled No. 1	1.25	@ 1.35
Solid Book Ledger	1.80	@ 1.90
Ledger Stock	1.60	@ 1.70
New B. B. Chips	.50	@ .55
Manilas—		
New Env. Cut	2.45	@ 2.55
New Cut. No. 1	1.75	@ 2.00
Extra No. 1 old	1.40	@ 1.50
Print	1.20	@ 1.30
Container Board	1.00	@ 1.10
Bogus Wrapper	1.00	@ 1.10
Old Krafts Machine compressed bales	2.10	@ 2.20
News—		
No. 1 White News	1.65	@ 1.75
Strictly Overissue	1.05	@ 1.15
Strictly Folded	.95	@ 1.05
No. 1 Mixed Paper	.75	@ .85
Common Paper	.55	@ .65

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.43	@ .48
No. 2	.41	@ .43
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.19	@ .20
Dark	.17	@ .19
B. C., 18 basis	.39	@ .41
A. B. Italian, 18 Basis	.51	@ .61
Finished Jute—		
Dark, 15 basis	.30	@ .31
Light, 18 basis	.28	@ .30
Jute Wrapping, 3-6 Ply—		
No. 1	.20	@ .23
No. 2	.18	@ .20
Tube Rope—		
4-ply and larger	.15	@ .17
Fine Tube Yarn—		
5-ply and larger	.20	@ .28
4-ply	.21	@ .24
3-ply	.22	@ .25
Unfinished India—		
Basis	.14	@ .15
Paper Makers' Twine		
Balls	.12	@ .13
Box Twine, 2-3 ply	.14	@ .15
June Rope	.20	@ .40
Amer. Hemp, 6	.30	@ .32
Sisal Hay Rope—		
No. 1 Basis	.14	@ .16
No. 2 Basis	.10	@ .12
Sisal Lath Yarn—		
No. 1	.14	@ .15
No. 2	.11	@ .13
Manila Rope	.18	@ .19

CHICAGO

[FROM OUR REGULAR CORRESPONDENT]

Paper

F. o. b. Mill		
All Rag Bond	35	@ 40
No. 1 Rag Bond	25	@ 35
No. 2 Rag Bond	14	@ 25
Water Marked Sulphite	9	@ 12
Sulphite Bond	6¾	@ 10¾
Sulphite Ledger	9½	@ 12
Superfine Writing	18	@ 24
No. 1 Fine Writing	14	@ 18
No. 2 Fine Writing	12	@ 14
No. 3 Fine Writing	9	@ 12
No. 1 M. F. Book	5¾	@ 7½
No. 1 S. & S. C. Book	6¾	@ 7¾
Coated Book	8	@ 10
Coated Label	8	@ 10
News—Rolls, mill	3¾	@ 4½
News—Sheets, mill	4	@ 4¾
No. 1 Manila	4¾	@ 6¼
No. 1 Fibre	4¾	@ 5½
No. 2 Manila	3¾	@ 4¼
Butchers' Manila	4	@ 4½
No. 1 Kraft	6	@ 6¼
No. 2 Kraft	5¼	@ 5¾
Wood Tag Boards	4½	@ 6
Sulphite Screenings	2½	@ 2¾
Manila Tissue, 20x30 sheet	7½	@ —
White Tissue, 24x36 sheet	7½	@ —
Boards, per ton—		
Plain Chip	50.00	@52.50
Solid news	52.50	@57.50
Manila Line Chip	60.00	@62.50
Container Lined—		
85 Test	70.00	@72.50
100 Test	75.00	@77.50

Old Papers

F. o. b. Chicago		
Shavings—		
No. 1 Hard White	3.25	@ 3.30
White Envel. Cuttings	3.25	@ 3.30
No. 1 Soft Shav.	3.15	@ 3.25
No. 1 Mixed	1.65	@ 1.75
No. 2 Mixed	1.60	@ 1.70

Ledgers and Writings	1.75	@	1.80
Solid Books	1.70	@	1.75
No. 1 Books, Light	1.35	@	1.40
Blanks	210	@	2.15
Ex. No. 1 Manila	2.30	@	2.40
Manila Envelope Cuttings	2.50	@	—
No. 1 Manila	1.20	@	1.25
Folded News (over issue)	1.00	@	1.05
Old Newspapers—			
No. 1	.95	@	1.00
No. 2	.90	@	.95
Mixed Papers—			
No. 1	.90	@	.95
No. 2	.80	@	.85
Straw Clippings	1.00	@	—
Binders' Clippings	1.00	@	—
Kraft	2.15	@	2.25
New Kraft Cuts	2.25	@	2.35
Roofing Stock, f. o. b. Chicago, Net Cash—			
No. 1	$42.00	@	—
No. 2	40.00	@	—
No. 3	38.00	@	—
No. 4	38.00	@	—

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT]

Paper

Bonds	.09½	@	.53
Ledgers	.15	@	.40
Writings—			
Superfine	.15	@	.20
Extra fine	.12	@	.22
Fine	.20	@	.30
Fine, No. 2	.20	@	.25
Fine, No. 3	.15	@	.20
Book, M. F.	.09¼	@	.12¼
Book, S. S. & C.	.11	@	.15
Book, Coated	.14¼	@	.20
Coated Lithograph.	.10	@	.15
Label	.10	@	.15
News	.05	@	.07
No. 1 Jute Manila	.12	@	.13
Manila Sul., No. 1	.08	@	.10
Manila No. 2	.07½	@	.08
No. 2 Kraft	—	@	.08½
No. 1 Kraft	—	@	.09½
Common Bogus	.03½	@	.04
Shaw Board	55.00	@	60.00
News Board	42.50	@	—
Chip Board	40.00	@	42.50
Wood Pulp Board	2.75	@	3.00
(Carload Lots)			
Binder Boards—			
Per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1-ply (per roll)	1.70	@	1.80
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.10

Bagging

F. o. b. Phila.

Gunny No. 1—			
Foreign	1.75	@	1.85
Domestic	1.75	@	2.00
Manila Rope	5.00	@	5.50
Sisal Rope	2.50	@	—
Mixed Rope	1.25	@	—
Scrap Burlaps	1.00	@	1.25
Wool Tares, heavy	2.00	@	2.13
Mixed Strings	1.00	@	—
No. 1, New Lt. Burlap	3.50	@	3.75
New Burlap Cuttings	3.50	@	—

Old Papers

F. o. b. Phila.

Shavings—			
No. 1, Hard White	3.40	@	3.60
No. 2, Hard White	3.25	@	3.40
No. 1 Soft White	3.10	@	3.25
No. 2 Soft White	2.00	@	2.25
No. 1 Mixed	2.00	@	—
No. 2 Mixed	1.25	@	1.30
Solid Ledger Stock	1.65	@	1.85
Writing Paper	1.50	@	1.75
No. 1 Books, heavy	1.45	@	1.60
No. 2 Books, light	1.15	@	1.25
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.75
Container Manila	1.25	@	1.40
Old Kraft	2.15	@	2.25
Overissue News	1.05	@	1.10
Old Newspaper	1.05	@	1.40
No. 1 Mixed Paper	.80	@	.90
Common Paper	.65	@	.70
Straw Board, Chip	.65	@	.70
Binders Bd., Chip	.65	@	.70

Domestic Rags—New.

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.12	@	.13
New White, No. 2	.07	@	—
Silesias, No. 1	.08¼	@	.08½
New Unbleached	.11½	@	.11¾
Washable	.05½	@	.05¾
Fancy	.07	@	.07¼
Cottons—according to grades—			
Blue Overall	.09½	@	.09½
New Blue	.03½	@	.03¾
New Black Soft	.06	@	.06¾
New Light Seconds	.03½	@	.03¾
Khaki Cuttings	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.10½	@	.11
New Black Mixed	.05	@	.05¼

Old

White, No. 1—			
Repacked	7.50	@	8.00
Miscellaneous	6.25	@	6.50
White, No. 2—			
Repacked	.05	@	.05½
Miscellaneous	.04¾	@	.05¼
Thirds and Blues—			
Repacked	3.65	@	3.85
Miscellaneous	3.15	@	3.25
Black Stockings	4.00	@	4.50
Roofing Stock—			
No. 1	2.30	@	240
No. 2	2.20	@	2.30
No. 3	1.15	@	1.20
No. 4	2.10	@	2.20
No. 5A	1.40	@	—
B	1.25		nominal
C	1.15		nominal

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11	@	.12½
Light tinted	.12	@	.13½
Dark tinted	.13½	@	.15
Ledgers (sulphite)	—	@	.13
Writing	.09½	@	.12
News, f. o. b. Mills—			
Rolls (carloads)	3.65	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Book—			
No. 1 M. F. (carloads)	9.00	@	—
No. 2 M. F. (carloads)	8.00	@	—
No. 3 M. F. (carloads)	7.50	@	—
No. 1 S. C. (carloads)	9.50	@	—
No. 2 S. C. (carloads)	8.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	$28.00	@	30.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	50.00	@	55.00
Sulphite, bleached	80.00	@	—
Sulphate	65.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.60	@	—
Soft White Book shavings	3.00	@	—
White Blk. News	1.90	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.50	@	—
Light and Crumpled Book Stock	1.35	@	—
Ledgers and Writings	1.75	@	—
Solid Ledgers	1.75	@	—
Manilas—			
New Manila Cut	—	@	1.60
Printed Manilas	1.20	@	—
Kraft	2.05	@	—
News and Scrap—			
Strictly Overissue	1.00	@	—
Folded News	1.00	@	—
No. 1 Mixed Papers	—	@	.85

Domestic Rags—
Price to mills, f. o. b. Toronto

	Per lb.		
No. 1 White shirt cuttings	.14	@	.14¼
No. 2 White shirt cuttings	.07	@	.07½
Fancy shirt cuttings	.07½	@	.08
No. 1 Old Whites	—	@	—
Third and blues	.05½	@	.05¾
	Per cwt.		
Black stockings	.04	@	—
Roofing stock:			
No. 1	2.20	@	—
No. 2	2.10	@	—
Manila rope	.06	@	.06¼
No. 2	1.55	@	—

BOSTON

[FROM OUR REGULAR CORRESPONDENT]

Paper

Ledgers—			
Sulphite	.08½	@	.18
Rag Content	.18	@	.36½
All Rag	.38	@	.50
Bonds—			
Sulphite	.07½	@	.14
Rag Content	.16	@	.33½
All Rag	.36½	@	.51
Writings	.08½	@	.20
Superfines	.20	@	.48
News	.04	@	.06½
Book, M. F.	.06¼	@	.10¾
Book, Super	.07½	@	.11
Book, Coated	.09½	@	.20
Coated Litho	.10	@	.15
Label	.09½	@	.15
Jute Manila No. 1	.12	@	.13
Manila, Sul. No. 1	.05	@	.06
Manila, Sul. No. 2	.03¾	@	.04¼
No. 1 Kraft	6¼	@	.06½
No. 2 Kraft	.05¾	@	.05½
Common Bogus	.03½	@	.04
Straw Board	50.00	@	55.00
News Board	47.50	@	50.00
Chip Board	45.00	@	47.50
Wood Pulp Board	80.00	@	85.00
Binder Boards	75.00	@	85.00
Tarred Felts—			
Regular	61.00	@	63.00
Slater's	66.00	@	68.00
Best Tarred, 1 Ply, roll	1.50	@	1.60
Best Tarred, 2 Ply, roll	1.70	@	1.80
Best Tarred, 3 Ply, roll	2.00	@	2.10

Old Papers

Shavings—			
No. 1 Hard White	4.00	@	4.25
White Blank News	1.75	@	2.00
Manila Env. Cuttings	2.80	@	3.00
No. 2 Hard White	3.25	@	3.50
No. 1 Soft White	3.10	@	3.25
No. 2 Soft White	2.25	@	2.50
No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.00	@	2.25
Writing Paper	—	@	1.70
No. 1 Books, Heavy	1.60	@	1.80
No. 1 Books, Light	1.40	@	1.50
No. 1 New Manila	2.50	@	2.60
No. 1 Old Manila	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.00	@	2.25
Overissue News	1.00	@	1.20
Old Newspapers	.90	@	1.00
No. 1 Mixed Paper	.70	@	.75
Box Board, Chip	.70	@	.75

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	1.12½	@	2.00
Domestic	2.00	@	2.12½
Manila Rope	6.00	@	6.50
Mixed Rope	1.50	@	1.62½
Scrap Burlaps	1.25	@	1.50
Wool Tares, heavy	2.00	@	2.13
Mixed Strings	1.50	@	1.62½
New Burlap Cuttings	2.00	@	2.25

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.13½	@	.14
Silesias, No. 1	.09	@	.09½
New Unbleached	.12½	@	.13
Washable	.06	@	.06½
Fancy	.07	@	.07¼
Cottons — according to grades, Blue Overall	.09½	@	.10
New Blue	.05½	@	.06
New Black, soft	.06	@	.06¼
Khaki Cuttings	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.10½	@	.11

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1—			
Repacked	7.50	@	8.00
Miscellaneous	6.50	@	7.00
White No. 2—			
Repacked	5.50	@	6.00
Miscellaneous	4.75	@	5.50
Thirds and Blues—			
Repacked	3.75	@	4.00
Miscellaneous	3.00	@	3.25
Roofing Stock—			
No. 1	2.25	@	2.37
No. 2	2.12½	@	2.25
No. 3	1.50	@	1.75
No. 4	1.15	@	1.20

Paper Mills in Saxony Shutting Down

WASHINGTON, D. C., October 8, 1924.—Partial and complete shutdowns are said to be on the increase in Saxony where paper manufacturers are complaining of generally unfavorable conditions in the industry, says Vice Consul Scott, at Dresden in a report to the Paper Division of the Department of Commerce.

Great difficulties are reported in the collection of outstanding payments and the situation is aggravated by the heavy taxes and high freight rates which are said to be raising production costs to a point which practically prohibits exportation.

In line with complaints of the generally unsatisfactory conditions in the industry, there has been a repeated demand on the part of industrial organizations for the prohibition of the exportation of rags, on the ground that present economic conditions in Germany demand that the raw materials should be retained for domestic consumption.

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, October 8, 1924.

The paper market at the present time is anything but a fertile field of comment. There is nothing of a novel nature transpiring and indeed it has been a long time since anything out of the ordinary has occurred to break in on the monotony. The past week has been as uneventful as any other and any word of comment must of necessity be a repetition of what has been said before. But in the paper market as everywhere else "no news is good news." The market is continuing to gain slowly but consistently. It has been on the gain long enough to prove that business is on a sure footing and that no erratic set-backs need be anticipated during the remainder of the year. While Fall business does not yet measure up to the hopes of the paper men who, during the dull weeks, remained most enthusiastic and most optimistic, it does measure up and beyond the anticipations of the more conservative and past experiences have made the great majority of paper men conservative. All figures go to show that business has, generally speaking, undergone a considerable betterment during the past month but no one is inclined to assert that business is yet in bang up shape. The conditions in the paper market are probably as good at this time as conditions are in most lines so paper men are justified in the knowledge that the paper business has not been singled out for adversity. There are many things which afford proof that the betterment will go on throughout the remainder of the year and if it does the paper men will be satisfied and will have no real cause to grumble. They look for no great stir until after election but then they look for more generous buying and a freer attitude on the part of the trade. There is little question but what politics are holding things back and retarding business which is waiting at the threshold but hesitating to step over the line. Prices in most instances are holding firm. Quotations on many items have stood still for so long that it almost seems as though they are fixed for good. Nothing seems to effect them one way or the other and they are probably due to remain unchanged for weeks to come. And yet there is a possibility of a rapid improvement in the market after November 4 attended by radical price changes all up and down the line. Everything considered it is more than likely that the progress of the market during the remainder of the year will be well worth watching closely.

Another good week was experienced by news print. It is keeping up an encouraging stride and it is expected that the demand which will exist for it during the remainder of the year will be normal.

Book papers are in increasing demand and the mills are speeding up a little better. There is competition of the keenest sort, however, and concessions are reported here and there.

Writing papers are showing a very notable improvement. The holiday demand is being felt and is causing a new impetus in this line. Many buyers have held off their buying unusually late this year but are coming to the front now as the holidays are drawing near.

Tissues are much better than they have been for many weeks and each week now helps them along. This is the season when tissues can always be depended upon to go forward and the long slow period they have had may cause a quarter forward movement this year than ordinarily.

Mechanical Pulp

With prices standing firm, the mechanical pulp market is very active. There is a good demand with none too much available stock in the market at the present time. A price increase within a short time is looked upon as extremely likely.

Chemical Pulp

All grades of chemical pulp are holding firm and bleached sulphite is especially so. It is said that the Scandinavian mills have about sold out and that their remaining stock is very limited.

Rags

Business in the rag market is getting better again after a little reaction. The market was strong the past week and the increased demand for new rags was particularly noticeable. There is still a shortage of rags and the mills are experiencing difficulty in getting some of their orders filled as rapidly as they would like to have them. This is the situation which the PAPER TRADE JOURNAL predicted some weeks ago as inevitable. The mills were not buying at that time when they could get them and now, when they must have them, they are experiencing some trouble in getting just what they want.

Old Rope and Bagging

Old rope and bagging, which have been answering a rather indifferent demand, have both showed a marked improvement during the past week.

Waste Paper

Waste paper picked up during the week. The immediate demand is much better than it was and many inquiries are being received which indicate a good buying market in the near future.

Twine

Twine continues to crawl forward very cautiously. It is not gaining fast enough to cause any hysteria but, after the slow period twine has been through, the twine men welcome anything in the line of improvement and are hopeful that now that the ice has been broken the market will pick up more rapidly.

Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., October 8, 1924.—The Government Printing Office will receive bids on October 10 for 168,075 pounds (2,350) reams of 31½ x 48 white sulphite bond paper.

Bids will also be received on October 15 for 61,000 pounds (450 reams) of buff and mellon wood bristol board 21 x 31—108. Bids will also be received on the same date for 1,725 pounds (150 reams) of 17 x 28—11⅛ No. 9 green glazed manifold bond paper.

The Government Printing Office has received the following bids for 40,000 pounds of mellon bristol board in 20 inch rolls: R. P. Andrews Paper Company at 5.34 cents per pound; American Writing Paper Company 6.75 cents; and Whitaker Paper Company 4.91 cents.

The printing office has also received the following bids for 6,500 pounds of 24 x 32—65 book paper; R. P. Andrews Paper Company 10.34 cents per pound, 11.59 cents and 12.59 cents; Mathers Lamm Paper Company 10.9 cents; Kalamazoo Paper Company 9.25 cents; Whitaker Paper Company 11.83 cents; Old Dominion Paper Company 10 cents, and Reese and Reese 10.44 cents and 11.43 cents.

The Virginia Paper Company has been awarded the contract by the Government Printing Office for furnishing 16,000 pounds (1,000 reams) of 21 x 32—16 No. 9 green manifold bond paper at 21.66 cents per pound, bids for which were received on September 12.

Reese & Reese will furnish 1,800 pounds (200 reams) of 21 x 32—9, white tissue paper at 12.15 cents per pound, bids for which were received on September 15.

The Bennington Wax Paper Company will furnish 3,200 pounds (200 reams) of 24 x 38—16, white paraffin paper at 11.5 cents, bids for which were opened on September 17.

The Whitaker Paper Company has been awarded the contract by the Bureau of Supplies and Accounts, Navy Department for furnishing 30,000 reams, of 8 x 10½ inch onion skinned typewriter paper at $16,500, bids for which were received on Sept. 16.

The Government Printing Office will receive bids on October 10 for 19,500 pounds, 500 reams of 24 x 38—39, No. 16, yellow sulphite writing paper. Bids will also be received on the same date for 2,550 pounds (50 reams) of 21½ x 31½ mimeograph paper.

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Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, October 8, 1924.

All that the chemical market needs at the present time is a definite announcement of a new price schedule which will set at rest some of the vague rumors which are springing to life. Failure on the part of the manufacturers to make any announcement as yet is having a very visible effect on the market and is apparently hanging up considerable business just when conditions are moving forward and when business is showing a new disposition to pick up. There is a feeling on the part of the buyers that prices on several of the commodities are too high and that the manufacturers cannot hope to maintain those prices when the time comes around for the renewal of contracts. Rumors, however, persist that the manufacturers not only hope to maintain those prices but that they will actually announce the present prices as the prices under which the new contracts will be made. It is logical to believe that this situation is clogging up business for buyers know that the prices can hardly be advanced and that a continuance of the present figures is about the worst that can happen from their viewpoint. Believing, therefor that they have nothing to lose by waiting for a definite announcement and that they have nothing to gain by buying beyond their immediate needs they are evidently doing the waiting. In spite of that, business in the chemical market is materially improved and is slowly becoming better all the time. Demand for most of the items is very fair and there is not the general chorus of complaint that was heard a month ago. It cannot be honestly said that things are just as they should be or that business is back where it ought to be at this time but the betterment during the past two or three weeks has been most gratifying and there is nothing very dangerous beclouding the near future apparently. The doubt as to the prices which will be ushered into by the next price schedule is about the only thing casting any uncertainty over the market at this time. The past week saw further slow improvement with prices holding firm and more numerous inquiries to denote an alert buying interest.

BLANC FIXE.—Blanc fixe has apparently won its struggle up out of the business depths. It had another fair week, showing an improved demand although it still has far to go before it gets back where it should be. It is still being quoted at from $75 to $80 a ton for the powder and from $50 to $55 for the pulp.

BLEACHING POWDER.—Bleaching powder is holding up and the price is firm but this is one of the commodities on which a new price announcement is being waited for. Information supposed to come from a responsible source is to the effect that there will be no change in price. There is a very general feeling, however, that the price now being asked is too greatly in excess of last year's price to be maintained. A year ago the price was down as low as 1.25 and there are many who, if they have to renew their contracts at the present figure, will do so only under the most strenuous protest. The present price is from 1.90 to 2.15 cents a pound.

CAUSTIC SODA.—Caustic Soda is fairly active and has just passed through another excellent week. There is little stock in the market and supply and demand are running neck and neck. It is selling at from 3.10 to 3.15 cents a pound on a flat basis at the works.

CASEIN.—Casein continues to move slowly. The competition here is very keen and is keeping the price down to the figure which has been quoted for some time now—from 10½ to 11 cents a pound.

CHINA CLAY.—China clay is moving along in a most satisfactory manner. For several weeks now it has been steadily forging ahead in a way that has brought smiles to those dealing in it. The price is from $16 to $20 a ton for the imported grades and from $12 to $15 a ton for the domestic.

CHLORINE.—About the same may be said of chlorine as has been said about bleaching powder. A new price schedule is waited for and pending this much business is being held in abeyance. The announcement of the new price has not materialized and chlorine continues to sell at from 4.50 to 7.00 cents a pound in tanks.

ROSIN.—The demand for rosin does not fall off. There is a good foreign demand as well as a good demand here at home. It is selling at $6.00 with frequent sales at a slightly higher figure.

SALT CAKE.—Salt cake is showing about as brisk a demand as is to be found anywhere in the market. Good Fall business in some of the trades using much salt cake is continually stimulating the demand. The price remains at from $17 to $20 a ton.

SODA ASH.—Last week was another bang up week for soda ash which is constantly showing better results. The price is 1.38 cents a pound on a flat basis at the works.

SULPHATE OF ALUMINA.—Sulphate of alumina is in better shape than it has been in weeks. During the past week there was a steady flood of inquiries indicating that the users are looking forward to the renewal of their contracts for next year and making arrangements to that end. The price is from 1.30 to 1.35 cents for the commercial grade at the Eastern works and from 2.10 to 2.25 cents a pound for iron free.

SULPHUR.—There is no change in sulphur, buyers taking out their stated quantities at stated intervals. The price is from $18 to $19 a ton.

TALC.—Talc continues to show some progress although it has much ground to make up. The price remains at from $16 to $17 a ton.

Bert Kent Goes with Kalbfleisch Corp.

Friends of Charles H. "Bert" Kent, especially those in the paper trade, will be interested to learn that he has resigned as Sales Manager of the Paper Makers Chemicals Company to join the forces of The Kalbfleisch Corporation of 200 Fifth avenue, New York City.

Since 1917, when Mr. Kent joined the Western Paper Makers Chemical Company, he has specialized in rosin size and sizing systems, first covering the Kalamazoo Valley but later coming to the Eastern territory, where he was located as sales Manager of the Paper Makers Chemical Company when resigning.

The manufacture of rosin size is practically a new departure for The Kalbfleisch Corporation. Its first activities along this line being about a year ago. Since then, however, it has extended very materially, opening a new plant at Kalamazoo on October 1, for its production.

The wide experience of Mr. Kent on this commodity qualifies him to further this work, and his efforts will be devoted largely to rosin size and sizing systems, embracing the entire field in United States and Canada.

Mr. Kent is a graduate of Dartmouth, class of 1910. He will continue to reside at Springfield, Mass., with official headquarters at 200 Fifth avenue, New York City.

Papermakers May Meet in Holyoke

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., Oct. 7, 1924.—Eagle Lodge Papermakers has taken no action regarding the possibility of holding the convention of the International Brotherhood of Papermakers in this city this year. As yet the place of meeting has not been decided upon. There will be something like 200 delegates attending. The Holyoke Chamber of Commerce stands ready to aid in securing the convention if the Holyoke lodge desires it but up to the present time there is no action by the lodge looking to securing it for Holyoke.

Goes with Western Paper Makers Chemical Co.

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., October 8, 1924.—C. L. Bachelder, until recently with the Consolidated Water Power & Paper Company, Wisconsin Rapids, Wis., has accepted a position with Western Paper Makers Chemical Company, of this city.